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THE JOURNAL OF
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TO
HAROLD NORTH FOWLER
HUMANIST, TEACHER, AND SCHOLAR
JOINT FOUNDER OF THE INSTITUTE
FOUNDER OF THE CLEVELAND AND BALTIMORE SOCIETIES
FOR ELEVEN YEARS EDITOR-IN-CHIEF OF THE
AMERICAN JOURNAL OF ARCHAEOLOGY
ON THE OCCASION OF HIS NINETIETH BIRTHDAY
THIS ISSUE IS AFFECTIONATELY
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GILGAMESH AND AGGA

SAMUEL NOAH KRAMER

WITH COMMENTS BY THORKILD JACOBSEN

Plates I-III

PROBABLY the most significant piece of creative writing in the ancient Near East is the long known Semitic epic poem commonly called "The Epic of Gilgamesh." Divided over twelve tablets, its text originally consisted of more than three thousand lines written in the cuneiform script and in the Semitic language now usually designated as Accadian. It is particularly remarkable for its plot-structure; a number of episodes in the restless, adventurous life of the hero Gilgamesh are integrated with no little skill into a relatively long and intricate epic tale, probably the first of such size and complexity in the history of epic literature. Moreover, this Babylonian product was current all over the ancient Near East; fragments of the epic written in the Accadian, Hittite, and Hurrian languages have been excavated in Boghaz Keui, in central Anatolia. In modern days, quite a number of cuneiformists have devoted much of their time and effort to the copying, translating, and interpreting of the poem; among the better known of these are George Smith and Paul Haupt, Peter Jensen and Campbell Thompson.

Now while on the whole the Epic of Gilgamesh may be accurately described as a Semitic literary creation, not a little of its contents goes back to Sumerian sources. Available at present, wholly or in part, are the texts of five Sumerian epic tales concerned with the deeds and adventures of the hero Gilgamesh; an analysis of their contents reveals that, while there was no Sumerian original for the Babylonian Epic of Gilgamesh as a whole, several of the individual episodes and motifs can be traced back to Sumerian prototypes.¹ However, by no means all of the Sumerian tales concerned with Gilgamesh were utilized by the Semitic authors and redactors of the Epic of Gilgamesh; it is one of these tales, an epic poem of which there is not a trace in the Semitic work, that forms the basis of the present study.

This Sumerian poem, which for reasons that will soon become obvious may be entitled "Gilgamesh and Agga," is one of the shortest of all Sumerian epic tales; it consists of no more than 115 lines of text. In spite of its brevity, however, it is of unusual significance from several points of view. In the first place, its plot deals with humans only; unlike the rest of the Sumerian epic tales, it introduces no mythological motifs involving any of the Sumerian deities. Secondly, it is of considerable historical importance since it provides a number of hitherto unknown facts concerning the early struggle between the cities of Kish and Erech. More important still is the implication of these new bits of data for modern historical methodology, for, interestingly enough and quite unintentionally of course, they help the present-day Orientalist to evaluate more intelligently his ancient source material and recognize some of its hidden pitfalls. Thus, one of the most important documents for the reconstruction of the earlier history of Sumer is the so-called "Sumerian King List."² According to this document, the first dynasty in Lower Mesopotamia immediately following

¹ Cf. the writer's "The Epic of Gilgamesh and Its Sumerian Sources," *JAOS*, lxiv, 1944, pp. 7-23 (also "Brief Communication" in *JAOS*, lxiv, 1944, p. 83) for a detailed discussion of the problem, as well as an

outline of the contents of the Epic of Gilgamesh and of the relevant Sumerian material.

² Cf. now Jacobsen's valuable study, *The Sumerian King List* (*AS* no. 11, 1939).

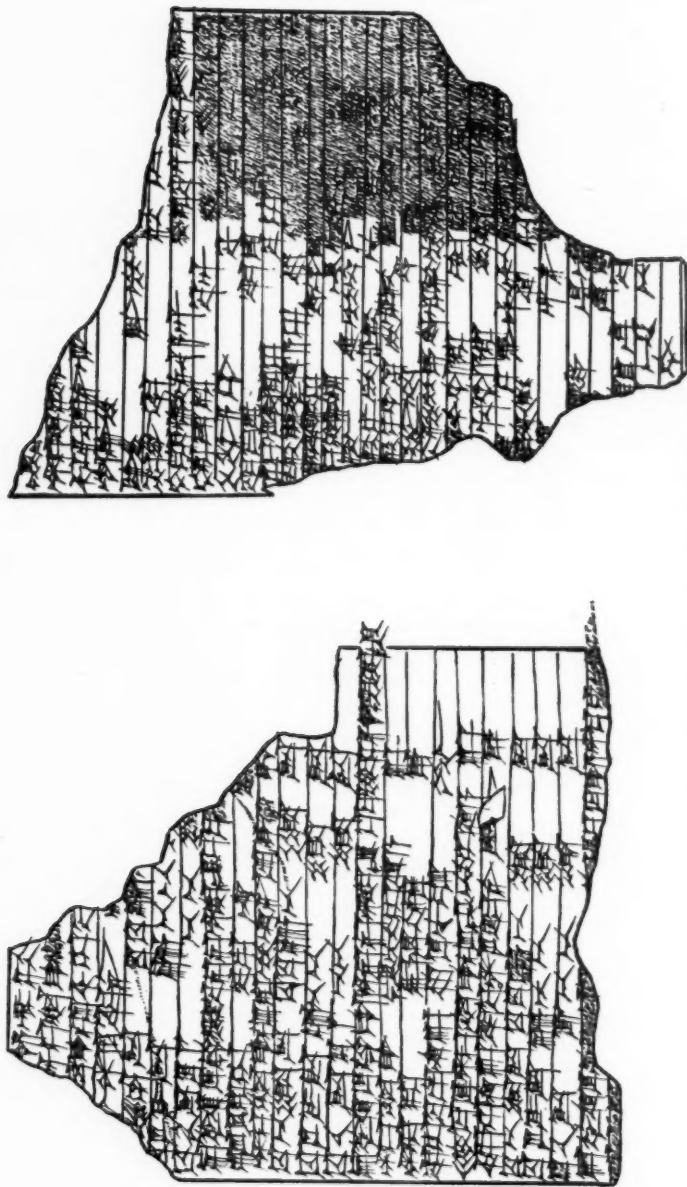


FIG. 1. TABLET B. CBS 10355, OBTVERSE AND REVERSE

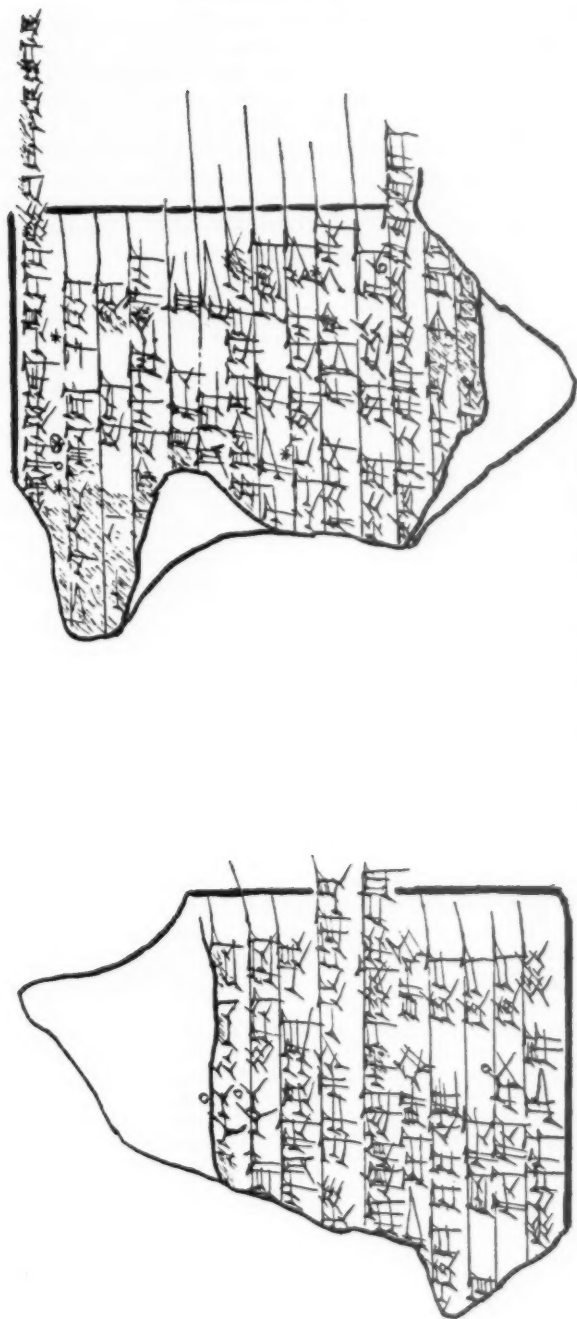


FIG. 2. TABLET H. NI. 4448, OBTUSE AND REVERSE

the flood is that of the city of Kish; it names the Agga of our poem as one of its kings. After Kish had been smitten with arms, the King List goes on to state, its kingship was carried to Eanna; among the kings of this second dynasty after the flood it lists the name of Gilgamesh. From these statements in the King List, the modern scholar would be led to conclude that the dynasty of Erech—Eanna and Erech are synonymous—did not begin its rule until the dynasty of Kish had come to an end as a result of a military defeat. Our poem, however, which treats Gilgamesh and Agga as contemporaries, shows fairly conclusively that this was not the case. For according to the King List, while Agga is actually the last king of the dynasty of Kish, Gilgamesh is not the first, but the fifth³ member of the succeed-

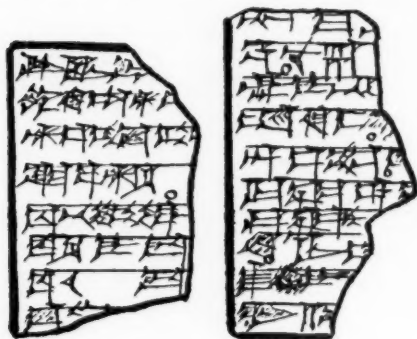


FIG. 3. TABLET D. Ni. 4396, OBVERSE AND REVERSE



FIG. 4. TABLET F. Ni. 4351, OBVERSE AND REVERSE

ing Erech dynasty; he is preceded by four rulers who must have reigned over a considerable span of time. In brief, as a result of the historical data provided by our poem, we now realize that in spite of the sequence arrangement in the King List, the dynasties of Kish and Erech overlap to a large extent.⁴

Finally, our poem is of very special significance for the history of political thought and practice. Thorkild Jacobsen, in a penetrating study of the first part of the poem several years ago,⁵ was the first to point out that it records what are by all odds the oldest two political assemblies yet known to man. To be sure, the tablets on which the poem has been found inscribed date back no earlier than the first half of the second millennium B.C.; however, the events recorded in them go back to the days of Gilgamesh and Agga, that is, probably to the first quarter of the third millennium B.C.⁶ According to the poem, there were two assemblies in Erech, one of elders and one of arms-bearing males. Gilgamesh, who

³ The relevant statement in "Sumerian Epics and Myths," *OIP* xv, 1934, p. 2 is to be corrected accordingly; cf. also M. Witzel, *Orientalia*, n.s., v, 1936, p. 333.

⁴ It is only fair to state that the authenticity of the arrangement and succession of the dynasties in the King List has been doubted by more than one scholar; cf. now Jacobsen, *AS*, no. 11, pp. 165 ff., and particu-

larly note 1 on p. 165. Our poem, however, furnishes one of the very rare bits of concrete evidence from an ancient source to support the modern scholar's suspicions and surmises.

⁵ *JNES*, ii, 1943, pp. 165-166.

⁶ Cf. the writer's "New Light on the Early History of the Near East," *AJA*, lii, 1948, pp. 156-164.

was eager to have them agree to a war with Kish, first consulted the elders. But these declared for peace even at the cost of submission to Kish. Displeased with this response, Gilgamesh brought the matter before the assembly of "men."⁷ These decided for war and independence in accordance with Gilgamesh's wishes.⁸

Turning now to the contents of the poem "Gilgamesh and Agga," they may be summarized as follows: Agga, the king of Kish, has sent envoys to Gilgamesh in Erech (lines 1-2); the purpose of the mission is not stated, but the following context makes it certain that they brought an ultimatum demanding that the Erechites submit to Kish or take the consequences. Gilgamesh seeks the advice of the assembly of elders and urges them, for reasons that are far from clear, to fight rather than submit (lines 3-8).⁹ But the elders are contrary

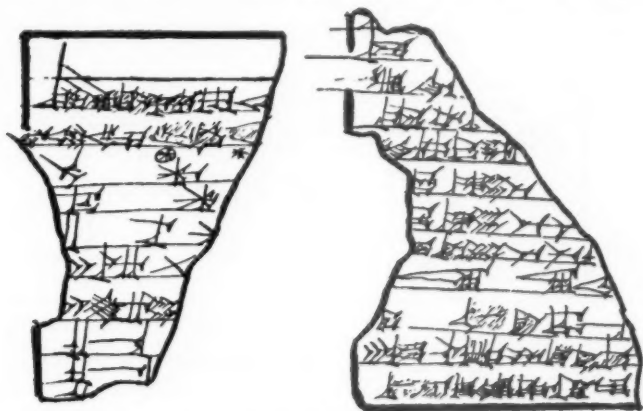


FIG. 5. TABLET E. NI. 9743, OBTVERSE AND REVERSE

minded; they would rather submit to Kish than fight it out (lines 9-14). Gilgamesh, displeased with this answer, now turns to the assembly of "men" and repeats his plea for war

⁷ The Sumerian word used is *guruš*; it may be rendered "men" with the implication that these are arms-bearing males; cf. now Jacobsen, *JNES*, ii, 1943, p. 166, note 44.

⁸ Unfortunately our poem gives no inkling of the size of the assemblies, nor of the method by which their members were selected, nor of the nature of what might be termed their parliamentary procedure. As for the authenticity of the few positive facts furnished by the poem with regard to the assemblies, it seems not unreasonable to assume that the poet who first composed it, although living many centuries after the events which he describes took place, was utilizing written records and oral traditions of a fairly trustworthy character; it is less than likely that he was projecting political conditions of a later day to the Gilgamesh-Agga period.

⁹ It is well to note at this point that our poem provides an excellent example of one of the major difficulties confronting the translator of the Sumerian unilingual material. Here is a composition whose text is in practically perfect condition; there is hardly a single word broken or missing. Moreover, the reading of almost all the signs is certain, and so, too, is the meaning of most of the individual words. In spite of these favorable conditions, however, several crucial passages remain uncertain and obscure; cf. particularly lines 5-7, a passage which is repeated in lines 11-13 and 20-22, lines 76-81 and the corresponding passage in lines 94-99. The major difficulty with these passages consists of their laconic style; the aphoristic, riddle-like character of their contents obscures, at least for the present, their real meaning.

with Kish rather than submission to its rule (lines 15-23). In a long statement ending with a eulogy of Gilgamesh and with highly encouraging words of victory, the assembly of "men" declare for war and independence (lines 24-39). Gilgamesh is now well pleased; in a speech to Enkidu, his servant and companion, urging him perhaps to take to arms, he shows himself highly confident of victory over Agga (lines 40-47). In a very short time, however, Agga besieges Erech, and in spite of their brave words, the Erechites are dumbfounded (lines 48-50). Gilgamesh then addresses the "heroes" of Erech and asks for a volunteer to go before Agga (lines 51-54). One Birhursurri readily volunteers; he is confident that he can confound Agga's judgment (lines 55-58). No sooner does Birhursurri pass through the city gate, however, than he is seized, beaten, and brought before Agga. He begins to speak to Agga, but, before he has finished, another hero from Erech, one Zabar . . . ga by name, ascends the wall (lines 59-67). There now follows a series of passages which are of utmost

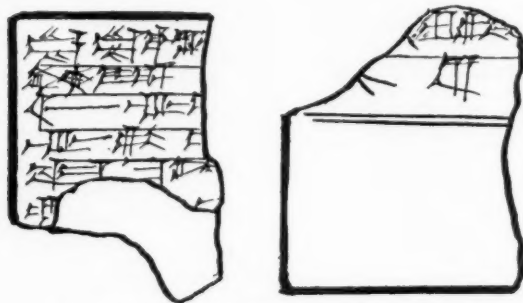


FIG. 6. TABLET K. NI. 4402, OBTVERSE AND REVERSE

importance for the understanding of the plot of the tale, but which, for the reasons outlined in the commentary below, are difficult and obscure. Certain it is, nevertheless, that in some way Agga has been induced to take a more friendly attitude and probably to lift the siege (lines 68-99). We then come to a passage whose meaning is quite certain; it consists of an address by Gilgamesh to Agga in which he thanks him for all his kindness (lines 100-106). The poem concludes with a paean of praise addressed to Gilgamesh (lines 107 to the end).

TRANSLITERATION¹⁰

1. lú-kin-gi₄-a-ag-ga¹¹-dumu-en-me-bara-gi₄-e-si-ke₄
kiš^{ki}-ta d^gilgameš-ra¹² unu^{ki} -šè mu-un-ši-súg-es

¹⁰ The texts utilized are: A, The Rylands Tablet; B, CBS 10355; C, Ni. 4448; D, Ni. 4396; E, Ni. 9743; F, Ni. 4351; G, CBS 4564; H, Ni. 4448; I, Ni. 2334; J, CBS 6140; K, Ni. 4402. CBS = Catalogue of the Babylonian Section, University Museum; Ni. = Nippur Collection, Asarika müzeleri, Istanbul. A copy of A was published by T. Fish in the *Bulletin of the John Rylands Library*, xix, 1935, pp. 369-372;

copies of B, D, E, F, H, and K are published for the first time on plates I-III of this number of the *AJA* (for a hitherto unpublished photograph of B, see plate 1); C was published by the writer in "Sumerian Literary Texts from Nippur," *AASOR*, xxiii, 1944, no. 3; G was published by Stephen Langdon in *Publications of the Babylon Section*, University Museum, x (part 2), 1917, no. 5 (for a hitherto unpublished

- ^dgilgameš¹³ i¹⁴-ab-ba-uru¹⁵-na-ka¹⁶
 inim ba-an-gar inim l-kin-kin-e
 rú til-li-da rú-rú¹⁷-kalam¹⁸ til-til¹⁹-li-da²⁰
 rú-nf-g-bàn-da-kalam til-til-li-da
 rú u-da eš²¹-lá til-til-li-da²²
 é-kiš²³^{k1} -šè gú nam-ba-gá-gá-an-dè-en²⁴ ²⁵tukul ga-àm-ma-sig-gi-en-dè-en²⁶
 ukkin-gar-ra-ab-ba-uru-na-ka²⁷
 10. ^dgilgameš²⁸-ra²⁹ mu-na-ni-ib³⁰-gi³¹-gi³²
 rú til-li-da rú-rú³³-kalam til³⁴-li-da
 rú-nf-g-bàn-da-kalam til-li-da
 rú u-da eš³⁵-lá til-til-til-li-da
 é-kiš³⁶^{k1} -šè gú ga-àm-gá-gá-an-dè-en³⁷ ³⁸tukul nam-ba-sig-gi-en-dè-en³⁹
^dgilgameš⁴⁰-en-kul-aba⁴¹ -a-ke⁴²
^dinanna-ra nir-gál-la-e
 inim-ab-ba-uru⁴³-na-ke, šà-šè nu-um-BU
 min-kam-ma-šè ^dgilgameš-en-kul-aba⁴⁴ -a-ke⁴⁵
 igi-guruš-uru-na-ke, inim ba-an-gar inim l-kin-kin-e⁴⁶
 20. rú til-li-da⁴⁷ rú-rú⁴⁸-kalam til⁴⁹-li-da
 rú-nf-g-bàn-da-kalam til-til-li da
 rú u-da eš⁵⁰-lá til-til-li-da

photograph of this tablet see plate II; in following the transliteration of the text, the reader should utilize the photograph as much as possible since Langdon's copy contains a number of errors; a copy of I was published by Edward Chiera in *Sumerian Religious Texts* (Upland, Pa., 1924), no. 38; J was published by the same scholar in "Sumerian Epics and Myths," *OIP*, xv, 1934, no. 29 (for a hitherto unpublished photograph of this tablet see plate III).

Line by line, the text of our poem is reconstructed as follows: lines 1-17=A, obv., col. i; lines 1-24=B, obv.; lines 1-12=C, obv.; lines 1-8=D, obv.; lines 1-12=E, obv.; lines 4-10=F, obv.; lines 16-66=G, obv. and rev.; lines 21-42=H, obv. and rev.; lines 32-49=A, obv., col. ii; lines 47-56=D, rev.; lines 47-57=F, rev.; lines 58-66=I, obv.; lines 61 to the end=J, obv. and rev.; lines 61-66=K, obv.; lines 73-82=E, rev.; lines 82-96=A, rev., col. iii; lines 88 to the end=B, rev.; lines 112 to the end=A, rev., col. iv; lines 114 to the end=K, rev.

All of the tablets except A, the provenience of which is unknown, were excavated in Nippur; they all date from the early Post-Sumerian period, that is, from the first half of the second millennium B.C. A translation of the poem based on the texts then available was published by Maurus Witzel in *Orientalia*, n.s., v, 1936, pp. 331-346. An excellent translation of most of the first forty-one lines of the poem was published by Jacobsen, *JNES*, ii, 1943, pp. 165-166; a brief résumé of the contents of the poem was published by the writer in *JASOS*, lxiv, 1944, pp. 17-18.

¹³ C: a-ka for ag-ga.

¹⁵ C omits -ra.

¹⁶ C and E add determinative ki.

¹⁷ C: -še for -ka.

¹⁸ A omits one rú.

¹⁹ C adds -ma after -kalam.

²⁰ C: -ti-ti for -til-til.

²¹ The traces in C point to -dam for -da.

²² In C, the sign seems to be rú; miscopy?

²³ In C, if the copy is correct, there is no dividing line between lines 6 and 7; the latter may therefore have been indented and considered by the scribe as part of line 6.

²⁴ A inserts -an- after -ba-; in C, the verb reads: nam-ba-an-gar-ri-en-dè-en.

²⁵ C: nam-ba-an-sig-gi-en-dè-en.

²⁶ A: -ke, for -ka.

²⁷ C omits -ra.

²⁸ In A, the traces point to -ib-.

²⁹ A omits on rú.

³⁰ A and C add one til.

³¹ In A, the sign seems to be rú; miscopy?

³² A: nam-ba-gá-gá-an-dè-en.

³³ A: ga-àm-ma-sig-gi-en-dè-en.

³⁴ In B, the scribe omitted the -maš of ^dgilgameš.

³⁵ G adds the determinative ki.

³⁶ In G, lines 18-19 read: min-kam-ma-šè ^dgilgameš igi-guruš-uru-na-ke inim ba-an-gar inim l-kin-[kin-e].

³⁷ G: -dam.

³⁸ G omits rú.

³⁹ G adds one til.

⁴⁰ G and H seems to have rú.

é-kiš⁴¹ -šè gú nam-ba-an-gar-ri-en-ši-en ⁴²tukul ga-àm-ma-sig-gi-en-dè-en⁴³
 ukkin-gar-ra-guruš-uru⁴⁴ -na-ka⁴⁵ ⁴⁶gilgameš mu-un-na-ni-ib-gi-gi₄

gub-gub-bu-ne tuš-tuš-ù-ne

dumu-lugal-la-da-ri-e-ne

haš-ansu-dib-dib⁴⁷ bi-ne

a-ba zi-bi mu-un-tuku-e-še

e-kiš⁴¹ -a gú nam-ba-an-gar-ri-en-ši-en ⁴⁸tukul nam-ba-sig-gi-dè-en⁴⁹

30. unu⁵⁰ -giš-kin-ti-dingir-ri-e-ne-ke₄⁵¹

é-an-na é-an-ta-e₁₁-dè

dingir-gal-gal-ene me-dím-bi ba-an-ag-eš-àm

bàd-gal-IM-dugud-ki-ús-sa-a-ba⁵²

ki-tuš-mah-an-ni-gar-ra-a-ba⁵³

sag mu-e-si za-e⁵⁴ lugal-ur-sag-me-en⁵⁵

sag-lum-lum nun-an-ni-ki-ág

du-a-ni-ta a-gim ní ba-an-te

erín-bi al-tur a-ga-bi-ta al-bir-ri

lú-bi-ne igi nu-mu⁵⁷ -da-šub(!)-gú-uš

40. u₄-bi-a ⁵⁸gilgameš-en-kul-aba⁵⁹ -ke₄

in[im]-guruš-uru-na-šè šà-ga-ni an-húl⁶⁰ har-ra-ni ba-an-zalag

arad-da-ni-en-ki-du₁₀-ra gù mu-na-dé-e

NE-šè ⁶¹šū-karú á-mé⁶² sa hē-im-mi-gi₄

⁶³tukul-mé á-zu-šè⁶⁴ hē-im-mi-gi₄⁶⁵

ní-gal-me-lám-ma hē-im-dím-dím-e⁶⁶

e-ne du-a-ni-ta ní-gal-mu hē-ib-šú

dím-ma⁶⁷ -ni hē-suh galga-a-ni hē-bir-ri

u₄-nu-iá-àm u₄-nu-u-àm

ag-ga-dumu-en-me-bara-gi₄-e-si unu⁶⁸ zag-ga ba-an-dib-bi-eš

50. unu⁶⁹ -ga dím-ma-bi ba-suh

⁷⁰gilgameš-en-kul-aba⁷¹ -ke₄

ur-sag-bi⁷² -ne-ir gù mu-na-dé-e

ur-sag-mu-ne igi mu-un MŪŠ-MŪŠ-ù-ne

šà-tuku hē-en-zi-zi-i ag-ga-šè ga-àm-ši-DU

bir⁷³ -hur-tur-ra lú-sag-lugal-a-ni

lugal-a-ni-ir⁷⁴ zà-sal mu⁷⁵ -na-ab-bi

mà-e ag-ga-šè ga-àm⁷⁶ -ši-DU

dím-ma-ni⁷⁷ hē-suh galga-a⁷⁸ -ni hē-bir-ri

bir-hur-tur-ri⁷⁹ ká-gal-la ba-ra-è

³⁸ H: *nam-ba-sig-gi-en-ši-en*; in G, the verb begins with *nam-ba-an-sig*.

³⁹ The determinative *ki* looks more like the sign DI on the original of G.

⁴⁰ H: -ri-ri for -dib-dib-.

⁴¹ H inserts -en- before -dè-en.

⁴² H omits -ke₄.

⁴³ In G, the line reads *bàd-gal bàd-an-ni-ki-ús-sa*.

⁴⁴ G and H: -ni for -a-ba.

⁴⁵ G omits -e.

⁴⁶ G and H: -bi for -me-en.

⁴⁷ A inserts -un-.

⁴⁸ A omits *šà-ga-ni an-húl*.

⁴⁹ A: -mé(!).

⁵⁰ A omits -šè.

⁵¹ In A, the verb seems to read *hē-im-zu(?) . . .*

⁵² In G, the verb may perhaps read *hē-d[im](?) -dím(?) -[e]*.

⁵³ A inserts -a-.

⁵⁴ D probably reads *ur-sag-e-n[e]* for *ur-sag-bi-ne*.

⁵⁵ D seems to have AŠ- for bir-.

⁵⁶ C omits -ir.

⁵⁷ C inserts -un-.

⁵⁸ C: -an- for -àm-.

⁵⁹ In C, -ni is erroneously repeated.

⁶⁰ C omits -a-.

⁶¹ C: -ra for -ri.

60. bir-hur-tur-ri⁶² ká-gal-la-è-da-ni
 ká-ká-gal⁶³-ka mu-ni-in-df-bi-es⁶⁴
 bir-hur-tur-ri⁶⁵ uzu-du-ni mu-ni-in-qum-qum-ne
 igi-ag-ga-šè mu-ni-in-te
 ag-ga-šè gù mu-na-dé-e
 inim-ma-ni nu-un-ti zabar- . . . -ga-ke₄ bàd-šè im-me(?)⁶⁶-e₁₁-de
 bàd-da gù-na im-ma-an-lá
 ag-ga igi im-ma-ni-in-du₃
 bir-hur-tur-ri gù mu-na-dé-e
 arad-LÚ.ŠE lugal-zu-ù
70. LÚ.ŠE lugal-mu in-nu
 LÚ.ŠE lugal-mu h́e-me-a
 sag-ki-gi₁₃-a-ni h́e-me-a
 igi-gi₁₃-ma-ka-a-ni h́e-me-a
 su₄-⁶⁷ za-gi₁₃-na-ka-a-ni h́e-me-a
 šu-si-sag₄-ga-ni h́e-me-a
 šár-ra la-ba-an-šub-bu-uš šár-ra la-ba-an-zi-gi-eš
 šár-ra sahar-ra la-ba-an-da-šár-ri-eš
 kur-kur dù-a-bi la-ba-an-da⁶⁸-šú-a
 KA-ma-da-ka(!?) sahar-ra la-ba-da-an-si
80. si-⁶⁹ma-gur₅-ra(?) la-ba-ra-an-kud
 ag-ga-lugal-kiš₁⁷⁰-a šà-erín-na-ka-ni LU+KÁN-a la-ba-ni-in-ag⁷¹
 mu-ni-ib-ra-ra-ne mu-ni-ib-sig-sig-gi-ne⁷²
 bir-hur-tur-ri uzu-du-ni mu-ni-in-qum-qum-ne
 egir-zabar- . . . ga-ke₄ ⁷³gilgameš bàd-šè im-⁷⁴e₁₁-dè
 ab-ba-du₁₃-du₁₃-lá-kul-aba⁷⁵-ke₄ me⁷⁶-lám bí-ib-šú-šú
 guruš-unu⁷⁷-ga-ke₄ ⁷⁸tukul-mé á⁷⁹-ne-ne bí-in-df-b
⁸⁰ig-ká-gal-la-ka⁸¹ sila-ba bí in-gub
 en-ki-du₁₀ ká-gal-la⁸²-aš ba-ra-è
⁸³gilgameš bàd-da gù-na⁸⁴ im-ma-an-lá
90. ag-ga igi ba(!)-ni-in-du₃⁸⁵
 arad-LÚ.ŠE lugal-zu-ù
 LÚ.ŠE lugal-mu i-me-a⁸⁶
 bí-in-dug₄-ga-gim-nam
 šár-ra ba-an-šub-bu-uš⁸⁷ šár-ra ba-an-zi-gi-eš⁸⁸
 šár-ra sahar-ra ba-an-da-šár-ri-eš⁸⁹
 kur-kur dù-a-bi ba-an-da-šú⁹⁰
 KA-ma-da-ka sahar-ra⁹¹ ba-da-an-si
 si-⁹²ma-gur₅-ra-ke₄⁹³ ba-ra-an-kud⁹⁴

⁶² C and I: -ra for -ri.⁶³ C inserts -la-.⁶⁴ C: mu-un- for mu-ni-in-.⁶⁵ I: -ra for -ri.⁶⁶ E probably -da-an- for -an-da.⁶⁷ E seems to read i-ni-in-ag for la-ba-ni-in-ag.⁶⁸ E seems to have a difficult variant reading mu-ni-ib-sig-sig-? en-NE.⁶⁹ J omits -lá- before -kul-; A inserts -a before -ke₄.⁷⁰ A: šu- for á-.⁷¹ A: -ke₄ for -ka.⁷² A omits -la.⁷³ A omits -na.⁷⁴ In A and B, the line reads igi-bar-ri-da-ni ag-ga igi bí-in-du₃.⁷⁵ So A and probably B; J omits i-me-a.⁷⁶ A adds -a; B adds -ám.⁷⁷ In A, the second verb reads: ba-an-šár-ri-eš-a.⁷⁸ A reduplicates -šár-; A and B add -ám.⁷⁹ A adds -ám.⁸⁰ B omits -ra.⁸¹ B: -ni for -ke₄.⁸² F: -ni-in- for -ra-an-.

- ag-ga-lugal-kiš⁸¹ -a⁸² ša-erín-na-ka-ni LU + KÁn-a ba-ni-in-ag⁸⁴
100. ⁸⁵gilgameš-en-kul-aba⁸¹ -ke₄
 ag-ga-a⁸⁶ gù mu-na-dé-e⁸⁶
 ag-ga-a⁸⁷ ugula-a⁸⁸-mu ag-ga-a⁸⁹ nu-bandà-mu⁹⁰
 ag-ga šakanna-erín-na-a-mu
 ag-ga mušen-kar-ra še bí-ib-si-si⁹¹
 ag-ga zi ma-an⁹²-sì ag-ga nam-ti ma-an⁹³-sì
 ag-ga lú-kar-ra úr-ra bí-in-tám-mu
 unu⁸¹ -giš-kin-ti⁹⁴-dingir-ri-e-ne-ke₄
 bád-gal bád-an-ni-ki-ús-sa⁹⁵
 ki-tuš-mah-an-ni-gar-ra-ni
110. sag mu- sì za-e lugal-ur-sag-bi⁹⁶
 sag-lum-lum nun-an-ni-ki-ág⁹⁷
 ag-ga kiš⁸¹ -še šu ba-ni-in-bar⁹⁸
 igi- ⁹⁹utu-še šu-u₄-bi-ta e-ra-an-gi₄⁹⁹
¹⁰⁰gilgameš-en-kul-aba⁸¹ -ke₄¹⁰⁰
 zà-sal-zu dùg-ga-àm¹⁰¹

TRANSLATION¹⁰²

1. The envoys of Agga, the son of Enmebaragesi
 Proceeded from Kish to Gilgamesh in Erech.
 The lord Gilgamesh before the elders of his city
 Put the matter, seeks out (their) word:
 "To complete the wells, to complete all the wells of the land,
 To complete the wells (and) the small bowls of the land,
 To dig the wells, to complete the fastening ropes,
 Let us not submit to the house of Kish, let us smite it with weapons."
 The convened assembly of the elders of his city
10. Answer Gilgamesh:
 "To complete the wells, to complete all the wells of the land,
 To complete the wells (and) the small bowls of the land,
 To dig the wells, to complete the fastening ropes,
 Let us submit to the house of Kish, let us not smite it with weapons."
 Gilgamesh, the lord of Kullab,

⁸³ B adds -ke₄.⁸⁴ Between lines 99 and 100, B inserts a line which reads: . . . unu⁸¹ -ga-ke₄ erín-bi⁸⁵ B: -aš for -a.⁸⁶ In B, the verb may read *sá mu-na-ni-ib-bi*; for the reading *sá*, cf. now Poebel, *Miscellaneous Studies* (AS no. 14), 1947, pp. 97 ff.⁸⁷ B omits -a.⁸⁸ B omits -a.⁸⁹ B omits -a.⁹⁰ Between lines 102 and 103, B inserts a line which probably reads: *ag-ga ensi-mu ag-ga šak[anna]-mu*.⁹¹ In B, the order of the lines 104, 105, and 106 is 105, 106, 104.⁹² B: *mu-e* for *ma-an*.⁹³ B: *mu-e* for *ma-an*.⁹⁴ B seems to have an added *ti*.⁹⁵ In B, the line probably read: *[bád]-gal-im-dugud-ki-us-sa-[a-ba]*.⁹⁶ In B, the first half of the line may correspond to our text, but the second half of the line seems to have a variant reading beginning with the sign *šu*.⁹⁷ B may have a variant reading for this line.⁹⁸ A: -ba for -bar; in A, lines 112 and 113 are in the reverse order.⁹⁹ So the original of J; the entire line is omitted in B.¹⁰⁰ A inserts -a before -ke₄.¹⁰¹ In J, the left edge has a line which reads . . . *lú-kin-gi₄-a-ag-ga*; perhaps it is a notation to indicate that the tablet which begins with line 61 of the poem was the second of two tablets which between them contained the entire text; cf. Witzel, *loc. cit.*, p. 396.¹⁰² Italics in the translation are used to indicate doubtful renderings as well as foreign words.

- Who performs heroic deeds for Inanna,
Took not the word of the elders of his city to heart.
A second time Gilgamesh, the lord of Kullab,
Before the men of his city put the matter, seeks out their word:
20. "To complete all the wells, to complete all the wells of the land,
To complete the wells (and) the small bowls of the land,
To dig the wells, to complete the fastening ropes,
Do not submit to the house of Kish, let us smite it with weapons."
The convened assembly of the men of his city answer Gilgamesh:
O ye who stand, O ye who sit,
O ye who are raised with the sons of the king,
O ye who press the donkey's thigh,
Whoever holds its¹⁰³ life,
Do not submit to the house of Kish, let us smite it with weapons.
30. Erech, the *handiwork* of the gods,
Eanna, the house descending from heaven—
It is the great gods who have fashioned its parts—
Its great wall touching the clouds,
Its lofty dwelling place established by Anu,
Thou hast cared for, thou who art king (and) hero.
O thou . . . -headed, thou prince beloved of Anu,
How hast thou feared his¹⁰⁴ coming!
Its army is small, it is scattered behind it,
Its men do not hold high (their) face."
40. Then—Gilgamesh, the lord of Kullab—
At the wo[r]d of the men of his city his heart rejoiced, his spirit brightened;
He says to his servant Enkidu:
"Therefore let the *šukara*-implement be put aside for the violence of battle,
Let the weapons of battle return to your side,
Let them produce fear (and) terror,
As for him,¹⁰⁵ when he comes, verily my great fear will fall upon him,
Verily his judgment will be confounded, verily his counsel will be dissipated."
The days were not five, the days were not ten,
Agga, the son of Enmebaragesi besieged Erech;
50. Erech—its judgment was confounded.
Gilgamesh, the lord of Kullab
Says to its heroes:
"My heroes *frown*;
Who has heart, let him stand up, to Agga I would have him go."
Birhurturri, his head . . . man,
Utters praises to his king:
"I would go to Agga,
Verily his judgment will be confounded, verily his counsel will be dissipated."
Birhurturri went out through the city-gate.
60. As *Birhurturri* went out through the city-gate,
They¹⁰⁶ seized him at the entrance of the city-gate,
Birhurturri—they crush his *flesh*,

¹⁰³ "Its" presumably refers to Erech.¹⁰⁴ "His" presumably refers to Agga; in the line following, "its" presumably refers to Kish.¹⁰⁵ "Him" presumably refers to Agga.¹⁰⁶ "They" presumably refers to Agga's men.

- He was brought before Agga,
 He speaks to Agga.
 He had not finished his word (when) Zabbar . . . ga ascends toward the wall;
 He *peered over* the wall,
 He saw Agga.
 Birhūrturri says to him:¹⁰⁷
 O servant of the *stout man*, thy king
 70. The *stout man* — is he not (also) my king?
 Verily the *stout man* is my king,
 Verily it is his . . . forehead,
 Verily it is his . . . face,
 Verily it is his beard of lapis-lazuli,
 Verily it is his gracious finger."
The multitude did not cast itself down, the multitude did not rise,
The multitude did not cover itself with dust,
(The people) of all the foreign lands were not overwhelmed,
On the mouths of (the people) of the lands dust was not heaped,
 80. The prow of the *magurru*-boat was not cut down,
 Agga, the king of Kish, *restrained* not his *soldierly* heart.
 They keep on striking him, they keep on beating him,
 Birhūrturri — they crush his flesh.
 After Zabbar . . . ga, Gilgamesh ascends toward the wall,
 Terror fell upon the old and young of Kullab,
 The men of Erech held their battle weapons at their sides,
 The door of the city-gate — they stationed themselves in its *approaches*,
 Enkidu went out toward the city-gate.
 Gilgamesh *peered over* the wall,
 90. He saw Agga:
 "O servant of the *stout man*, thy king
 The *stout man* is my king."
 As he spoke,
The multitude cast itself down, the multitude rose,
The multitude covered itself with dust,
(The people) of all the foreign lands were overwhelmed,
On the mouths of (the people) of the lands dust was heaped,
 The prow of the *magurru*-boat was cut down,
 Agga, the king of Kish, *restrained* his *soldierly* heart.
 100. Gilgamesh, the lord of Kullab
 Says to Agga:
 "O Agga, my overseer, O Agga, my steward,
 O Agga, my army leader,
 O Agga, the fleeing bird thou hast sated with grain,
 O Agga, thou hast given me breath, thou hast given me life,
 O Agga, thou bringest the fleeing man *to rest*."
 Erech, the *handiwork* of the gods,
 The great wall touching the sky,
 The lofty dwelling place established by Anu,
 110. Thou hast cared for, thou who art king (and) hero.
 O thou . . . -headed, thou prince beloved of Anu,

¹⁰⁷ For the ambiguity involved in the "him" of this line, cf. the commentary to lines 68–75.

Agga has set thee free for Kish,
 Before Utu he has returned to thee the power of former days;
 O Gilgamesh, lord of Kullab,
 Thy praise is good.

COMMENTARY

Lines 1-2. For the variant writings of the name Agga, cf. Jacobsen, *AS*, no. 11, 1939, p. 84, note 99, and cf. the variant *a-ka* in our text C (see above, p. 6, note 10). For the transliteration of the signs AG-GA as *ag-ga*, as well as for the method of transliteration of our poem as a whole, cf. Kramer, *AS*, no. 12, 1940, pp. 6-8. For the writing of the name Enmebaragesi, cf. Jacobsen, *loc. cit.*, p. 83, notes 93 and 94. For a correct restoration of the beginning of line 2, cf. Witzel, *Orientalia*, n.s., v, 1936, p. 342. For the writing of the name Gilgamesh, cf. Jacobsen, *loc. cit.*, p. 89, note 128; Kramer, *JAOS*, lxiv, 1944, p. 11, note 15, and *JCS*, i, 1947, p. 34, note 213; note that in text A (see note 10) the sign used everywhere except on rev. col. i, line 8 is *BL*, not *Bf*, unless some miscopy is involved.

Lines 3-8. In line 3, note the omission of the subject element *-e* after *4gilgameš*. Lines 5-7 (the text is repeated in lines 11-13 and 20-22) contain a proverb-like or riddle-like passage whose meaning in the context is altogether obscure; the renderings given are those usually attributed to the individual words, but they may prove to be unjustified. Similarly the grammatical relationships among the various complexes are by no means certain. To judge from the contents of line 8, one might be led to conclude that the passage contained in lines 5-7 gives Gilgamesh's reasons for his plea to fight rather than submit to Kish. It will be noted, however, that in the passage immediately following, the very same words are used by the assembly of elders to justify their decision to submit to Kish rather than go to war. In short, we may have here an early example of what is now generally described as "double-talk." In line 6, *niġ-bān-da* is taken to be a type of bowl used primarily to hold milk and butter, cf. A. Deimel, *Sumerisches Lexikon*, no. 597:172 and "Sumerian Literary Texts from Nippur," *AASOR*, xxiii, 1944, no. 35, obv., col. i, line 27; it may turn out that the complex should be read *niġ-bān-da* with a meaning approximating "that which is second in size," a phrase descriptive in some way of the preceding *PÚ*. In line 8, note the variant *nam-ba-an-gar-ri-en-dè-en* for *nam-ba-gá-gá-an-dè-en*; some post-Sumerian scribal schools, therefore, formed the present-future of the verb *gar* in the regular way instead of by using the reduplicated root. In the same line note the variant *nam-ba-* for *ga-àm-ma-* in the second verbal form (cf. also the variants to lines 14 and 23); it is difficult to decide whether these variants involve errors, or whether they actually represent different versions of the lines (cf. especially the comment to line 14 where an error seems to be clearly indicated).

Lines 9-14. For lines 11-13, cf. the comment to lines 5-7. In line 14, note the variants in text A which give a meaning exactly opposite to that of our reconstructed text; that the scribes of A erred, however, seems to be reasonably certain from the contents of line 17.

Lines 15-17. The name Kullab in line 15 refers to a district in Erech or adjacent to it. In line 16, note the rather unusual plene writing involving the subject element *-e*. For *šà-šè-bu* in line 17, cf. *JAOS*, lxiv, p. 23, note 115; the Sumerian compound corresponds to the Semitic *amāta ana libbi šadādu*.

Lines 18-23. For lines 20-22, cf. comment to lines 5-7. In line 23, note that while the second verb is the *first* person plural, the first verb is the *second* person plural; it is difficult to see the reason for the change (note, moreover, that the variant in text H and probably G has the second verb, too, in the second person plural).

Lines 24-39. Lines 24-27, if the rendering is correct, describe the aristocrats ruling Erech; just what the connection between them and the assemblies may have been, is unknown.¹⁰⁸ In line 28, the meaning of the postposition *-e-še*, sometimes found at the end of verbs, is still obscure; it is left unrendered in our translation.¹⁰⁹ In line 29, the translation assumes that the *nam-ba* of *nam-ba-síg-gi-dè-en* is an error for *ga-àm-ma-* (cf. comment to line 14, where the same error seems to be involved). In line 32, note that in spite of the copy, text A, obv. col. ii, line 1 reads *me-dím(!)-bi*.¹¹⁰ In line 34, the variant *-ni* for *-a-ba* seems inexplicable. In lines 36-39 note the numerous doubtful renderings as well as the far from assured assumptions that the *-ni-* of *du-a-ni-ta* (line 37) and the *-bi* of *erín-bi* (line 38) refer to Agga and Kish respectively. In line 39, the verb is of course a preterit and its more literal rendering may perhaps be "they raised."

Lines 40-47. The rendering of line 43 is most uncertain; it is predicated largely on the assumption that it parallels line 44 in meaning, that is, Enkidu is urged to put aside the peaceful agricultural implement known as the *šukara* in preparation for the expected battle with Kish.¹¹¹ In lines 43, 44, and 45, note the use of the precatative particle *hē-* with the preterit of the intransitive verb *gi*, and with the present-future of the transitive verb *dím*. In lines 46 and 47, note the use of the asseverative particle *hē-* with the preterit of the intransitive verbs *šú* and *suḫ*, but with the present future of the root *bir*.¹¹²

Lines 48-50. In line 49, the verb is in the plural although the subject seems to be Agga; this may perhaps be justified on the assumption that under Agga the poet intended to include his army as well. In the same line note the omission of the subject element after the first complex, and the seemingly unjustified writing *zag-ga* for *zag*.

Lines 51-58. For *-na-* instead of *-ne-* in *mu-na-dé-e* in line 52, cf. Falkenstein, *AOF*, xiv, 1942, pp. 128f. For the uncertainty of the reading *DU* in *ga-àm-ši-DU* (line 54), cf. *JCS*, i, p. 39, note 228. Instead of *ga-àm-ši-DU* one might perhaps have expected *hē-im-ši-DU* "let him go." In line 55, note that in the complex *lú-sag-lugal-a-ni*, both *sag* and *lugal* seem to be in apposition to *lú*; in spite of the obvious meaning of the individual words, the rendering of the complex remains difficult.

Lines 59-67. The complex *ká-gal-la* in lines 59 and 60 might have been expected to read *ká-gal-ta*. In lines 60 and 61, the plural verb must refer to Agga's men, although actually these have not been mentioned directly anywhere in the text.¹¹³ In line 62, the rendering "his flesh" for *uzu-du-ni* assumes that the word for flesh is *uzu(d)*; note, however, that *uzu-du* has thus far been found only in the meaning "tall."¹¹⁴ The verb in line 62 might have been expected to contain an *-e-* or an *-ù-* before the final *-ne*; we may perhaps assume, how-

¹⁰⁸ For the expressions "sit" and "stand" (line 25) cf. Jacobsen, *JNES*, ii, p. 160, note 24 and Kramer, *BASOR*, xciv, p. 8 (line 70).

¹⁰⁹ In his *Miscellaneous Studies* (p. 98, note 32), Poebel tentatively explains *-še* as a dialectal form of *-ene*; in our case, however, there is no reason to assume that line 28 is written in any but the main dialect, the *Eme-kur*.

¹¹⁰ Cf., for example, the first sign in line 16 of the same column.

¹¹¹ The rendering "therefore" for *NE-še* rests on the assumption that it is to be read *ne-še*, "for this," that is, for the expected conflict with Kish. For *šu-karā* as an agricultural implement, cf. the line in an agricul-

tural wisdom text which reads *šū-ka-rá-zu sa ḫa-ra-ab-gi-a* ("Sumerian Epics and Myths," *OIP*, xv, 1934, no. 42, obv., col. i, line 16 + *Oxford Editions of Cuneiform Texts*, i, pl. 32, col. i, line 14), and note the use of *šu-ka-rá* with the verbal compound *sa-gi-a*. The rendering "for the violence of battle" treats the complex *á-mé* as if it read *á-mé-še*.

¹¹² For the rendering of *dím-ma*, cf. *AS*, no. 11, p. 88 (note the change to be made in the translation of the line there quoted), and note 775; also *JCS*, i, p. 4, note 3.

¹¹³ Cf., however, comment to line 49.

¹¹⁴ Cf. *JCS*, i, p. 10, note 15, and p. 35, note 215.

ever, that the preceding *-qum-qum-* was actually pronounced *quqmu*. In line 64 note the very unusual use of *-šè* for *-ra* in the first complex; cf. also the variant *ag-ga-aš* in line 101. For the compound verb *gú-la* in line 66, cf. *JCS*, i, p. 34, note 212.¹¹⁵ Note, too, that *gú-na* in line 66 might have been expected to read *gú-ni*; cf. e.g. *gú-mu*, not *gú-mà*, in *JCS*, i, p. 8, line 25.

Lines 68-75. The meaning of this passage presumably containing the words uttered by Birhūrurri in the hope of soothing Agga and inducing him to call off his men and lift the siege, is quite uncertain and obscure. One of the major difficulties results from the ambiguity of the "him" of line 68. If we assume that it refers to Agga, then Birhūrurri seems to say to him that an individual described as a "stout man"¹¹⁶ is not only Agga's "king" but also his, that is, Birhūrurri's. Presumably this "stout man" would be Gilgamesh, since the latter is not only Birhūrurri's overlord, but also, as lines 102-103 seem to indicate, that of Agga as well. But just how was this statement expected to pacify Agga? Indeed, if Agga recognized Gilgamesh as his king, why did he proceed against Erech in the first place? Another difficulty with this assumption is that it does not explain in any way the presence of Zabar . . . ga on the wall. Perhaps therefore we must assume that the "him" of line 68 refers to Zabar . . . ga and that the "stout man" of lines 69, 70, and 71 refers to Agga, not Gilgamesh; that is, Birhūrurri, while standing before Agga cries out to Zabar . . . ga who is looking down on the scene from the wall, that Agga is the acknowledged king of both. For the rendering of *in-nu* (line 70), cf. a forthcoming publication by Falkenstein of the Ibbisin letter whose text is reconstructed from *Publications of the Babylonian Section*, University Museum, xiii, nos. 3 and 6 and G. A. Barton, *Miscellaneous Babylonian Inscriptions*, no. 9.

Lines 76-81. The highly doubtful rendering of this passage assumes that Birhūrurri's words had failed to satisfy Agga and his men, and that as a result the siege continued. The "multitude" of lines 76-77, the "people of all the foreign lands" of line 78,¹¹⁷ the "people of all the lands" of line 79,¹¹⁸ if the translations are correct, all refer to Agga's motley host besieging Erech; the acts attributed to them in these lines are descriptive of their total indifference to Birhūrurri's words. Line 80 may indicate that the siege was conducted by sea as well as by land; just what the cutting down of the prow of the *magurru*-boat¹¹⁹ signified, however, is not clear.¹²⁰

Lines 82-90. According to this passage, Gilgamesh, seeing that Birhūrurri's words had no effect on Agga and his men, in spite of the presence of Zabar . . . ga on the wall, himself ascends the wall. At this act, the young and old of Erech are terrified, presumably because of the danger threatening Gilgamesh; the men of Erech now hold their weapons in readiness while Enkidu goes out to the city gate, perhaps to take charge of the Erechites in the expected battle.¹²¹

Lines 91-99. Lines 91-92 probably represent a much abbreviated form of the passage con-

¹¹⁵ The rendering "peer over" for *gú-lá* (literally "to stretch the neck") seems preferable to "climb" as suggested in the *JCS*.

¹¹⁶ For the meaning and reading of *lú-še*, cf. particularly Delitzsch, *Sumerisches Glossar*, p. 202.

¹¹⁷ For lines 76-78, see now Falkenstein, *AOF*, xiv, 1942, p. 120.

¹¹⁸ As for the final *-a* of this line, cf. lines 94-98 where the verbal forms have variants ending in *-a* or *-am* without any particular semantic significance.

¹¹⁹ For the *magurru*-boat, cf. now Armas Salonen, *Die Wasserfahrzeuge in Babylonien*, 1939, pp. 12-19.

¹²⁰ In the rendering of line 81, note that its corresponding line 99 has a variant which has the subject element after the first complex; for the meaning of the compound *lú-kaš-šar* - *ag*, cf. the discussion by Poebel in *AOF*, ix, pp. 267-273.

¹²¹ With lines 83, 84, 89, and 90, cf. lines 62, 65, 66, and 67.

tained in lines 69-75;¹²² note, too, that the crucial line corresponding to line 68, that is, "Birhurturri says to him," is omitted. As in the case of the former and fuller passage, the interpretation of lines 91-92 hinges on the ambiguous "him" whom Birhurturri is addressing. If this "him," refers to Agga then the "stout man" of lines 91-92 is Gilgamesh; if on the other hand, it refers to Gilgamesh, then the "stout man" is Agga; cf. the comment to lines 69-75. In any case, this time Birhurturri's words seem to have the desired effect;¹²³ for according to lines 94-99 which are an exact repetition of lines 76-81 except that the verbs are all positive instead of negative in form, the multitudinous host for many lands which was besieging Erech was now prostrate and overwhelmed, and presumably no longer threatened Erech.

Lines 100-106. In this passage Gilgamesh thanks Agga for some extraordinary kindness, presumably for the lifting of the siege; unless there has been a shift of scene unmentioned in the text, Gilgamesh is addressing Agga from the wall of Erech. Note, too, that according to lines 102-106, unless we are prepared to read in implications contrary to the obvious meaning of the words, Gilgamesh addresses Agga as his, that is, Agga's superior and overlord in spite of the fact that Agga seems to be the more powerful of the two (cf. the comment to lines 68-75). In line 104, "the fleeing bird," and in line 116, "the fleeing man" refer no doubt to Gilgamesh.¹²⁴

Lines 107 to the end. The translation assumes that this entire passage contains the poet's concluding eulogy of Gilgamesh. For lines 107-111 (cf. also the variant in note 87), see the comment to lines 30-36 which are almost identical. The implications of lines 112-113 are not clear. On the surface they seem to say that Agga has restored Gilgamesh to his former greatness, which again tends to indicate that at one time Gilgamesh was the ruler of the entire land, including Kish (cf. comment to lines 100-106 and lines 68-75).¹²⁵ The last two lines contain the conventional phrases for the end of a myth or epic tale.

APPENDIX

Following the completion of this study, the writer forwarded the manuscript in its entirety to Thorkild Jacobsen for corrections and suggestions. As the following paragraphs show, this was a fortunate move; Jacobsen's comment has proved most constructive for the interpretation of the text of the poem. Particularly noteworthy are his renderings of lines 36-39; the interpretation of the enclitic *-eše* (line 28), and the reading of the hero's name in lines 64 and 84 as *zabar-dīb-unu^k-ga*; in all three cases Jacobsen has probably "hit the nail on the head." The "corvé" suggestion for lines 5-7 and the proposed changes in the renderings of lines 1-2 may also turn out to be quite correct. The suggested renderings of lines 25-28, 67-75, and 90-94 seem less certain; nevertheless they may prove to be closer to the truth than those of the writer. Following, then, is Jacobsen's comment in practically his own words:

¹²² It is hardly likely that the use of *i-me-a* for the corresponding *hé-me-a* is of semantic significance; note that in F, *i-me-a* is omitted altogether.

¹²³ For *gim-nam* in line 93, cf. Poebel, *Grundzüge der sumerischen Grammatik* (Rostock, 1923), ¶ 353.

¹²⁴ The reading *sakanna* for *ANŠU. ARAD* in line 103 is based on the loan-word *sakannakku*. In line 106 the rendering "to bring to rest" for *úr-ra-tám* is based on a more literal meaning of the compound such as "to bring on the lap."

¹²⁵ As for the phrase "before Utu" in line 113, it may refer to the sun-god Utu as the god of justice; it may perhaps be worth noting, however, that two predecessors of Gilgamesh in the first Erech dynasty are described as "the son of Utu"; thus the founder of the dynasty according to the King List, Meskiaggasher is termed "the son of Utu" in the King List itself (cf. Jacobsen, *AS*, no. 11, p. 84), while his son Enmerkar is so described throughout the epic tales in which he is a major protagonist.

Here are a few comments. I feel that the text is still full of difficulties and unsolved problems and I offer these suggestions in a very tentative fashion:

Lines 1-3. To account for the subject element in line 1, I would prefer to take *sûg* as factitive, "to cause to go," and *eš* at the end of the form as the accusative element third person plural (cf. *GSG*, ¶517); the rendering of these two lines would therefore read: "Agga, the son of Enmebaragesi sent envoys from Kish to Gilgamesh in Erech." On the resumption of the direct object *lu-kin-gi-a* by the accusative element in the verb, cf. the second quotation in *GSG* ¶517.

Lines 5-7. These lines describe the corvé or labor service to which Agga summoned the Erechites through his messengers. The work is agricultural: to dig wells, etc.

Lines 25-28. Very tentatively I suggest to read *-dè* instead of *-ne* for the sign NE at the end of verbal forms in lines 25-27 and to translate:

- 25. "To continually stand at attention, to continually be assigned to a post.
- 26. To go on raids with the king's son,
- 27. To continually urge on the donkey,
- 28. Who has wind (enough) for that?"

I interpret these lines as follows: Whereas the older men will be used for agricultural tasks, the *guruš* will be used for raids and campaigns in military service. The words *gub* and *tuš* (line 25) are technical terms for tasks connected with labor or military service; examples occur in the texts of the Ur III period. Military service is an exhausting life and few have stomach for it, or, to render literally the Sumerian word *zi* (line 28), few have "breath" or "wind" enough for its exertions. The *eše* at the end of line 28 marks direct speech and acts as a kind of "inverted commas." It may be translated "there is a saying," or "people say," and marks these lines as a common saw. It is frequent in bilingual proverbs.

Lines 36-39. I would propose the rendering of these lines as follows:

- The smasher of heads, the prince beloved by Anu,
- How they (the enemy) fear his coming!
- Their army diminishes, scatters from behind (i.e. people desert),
- Their men cannot face him (literally, hold up the face against him).

Lines 67-75. The immediately preceding section is difficult in the extreme. Tentatively I suggest that we have parallelism with the episode in lines 84 ff. This would mean that Birhurturri is the slave of Zabardibunuga (I would read the Sumerian signs for that name as *zabar-dib-unu^{ki}-ga*), just as Enkidu is the slave of Gilgamesh. Lines 67-68 I would render as: "Agga saw him (Zabardibunuga), Birhurturri calls out to him (to his master, Zabardibunuga)." Line 69 I take to contain a question directed by Agga to Birhurturri, and is to be rendered: "Slave, is thy master the 'grain-giver'?" "Grain-giver" I take to be a title like "lord" which originally meant "the one who distributes the loaves." The "grain-giver" is the "employer" who distributes the grain-rations, and refers to Gilgamesh, the ruler of Erech. In line 69, therefore, Agga is asking Birhurturri who is standing before him whether the man on the wall, really Zabardibunuga, is Gilgamesh. Birhurturri's answer is given in lines 70-75 which I would render as follows:

- "My master is not the 'grain-giver' (Gilgamesh),
- Though my master might (as well) have been the 'grain-giver,'
- Though it might (as well) have been his (Gilgamesh's) wrathful forehead,
- Though it might (as well) have been his bison's face,

Though it might (as well) have been his dark blue beard,

Though it might (as well) have been his gracious fingers."

Birhurturri states in this speech that his master is not "the lord" (i.e. Gilgamesh), although he is so impressive of appearance (and valour) that it might as well have been "the lord" at whom Agga was looking. For the meaning "though," cf. *GSG* ¶439; for the third sign in line 71 read *huš*(!); for the second sign in line 72 read *alim*(!).

Turning now to the parallel passage in lines 84 ff., I suggest that line 90 (cf. line 66) is to be rendered: "Agga saw him (Gilgamesh)"; that line 91 (cf. line 68) is to be rendered "Slave, is thy master the 'grain-giver'?" and contains a question directed by Agga to Enkidu; that lines 92-93 contain Enkidu's answer and may be rendered in strict literalness, "It is like what you said that my master is the 'grain-giver.'" Grammatically this rendering of lines 91-92 is to be justified as follows: "It is" is for the final -am of *gim-nam* (*gim(i)n-am*); "like" is for *gim(i)n*; "what" is for the final -a of *bi-in-dug-ga*; "you said" assumes that *bi-in-dug*, is for *bi-e-dug*; "that" is for the final -a of *i-me-a*; the rest of the sentence offers no grammatical difficulties.

As for the remainder of the story I am not able to give a substantiated account of my interpretation and rendering without further study, and so I have nothing constructive to offer. I still believe that Gilgamesh rather than Agga was victorious. But I can see why you feel obliged to take the opposite view.

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MORAVIA IN PALAEOOLITHIC TIMES

KAREL ABSOLON

Plates IV-V

THE sensational new discoveries of American fossil man in Tepexpan, Mexico, may reawaken interest in the United States for general palaeo-ethnology, the science of fossil man and his cultures. It is well known that the cradle of this science lies in Western Europe, from the days of Boucher de Perthes to the Abbé Henri Breuil. American science possesses some of the finest works in the famous publications of Henry Fairfield Osborn, George Grant MacCurdy and many others.

Only the specialists, however, know that in addition to France there is another country in Europe which is immensely rich in relics of fossil man — Moravia, the central part of the Czechoslovak Republic. A glance at a map shows that Moravia forms the very center of Europe, a bridge between East and West not only in our time, but even in the diluvial¹ period.

Why does Moravia occupy this position? It lies in the center of the expansion of the great Eurasian migration line which fossil man followed from some unknown paradise in Asia, the hypothetical center of creation, in a westward movement along the southern edge of the glaciers covering most of Russia and Germany. In Moravia (see map, pl. IV, A) the glaciers reached to the northern border, where the great industrial center of Moravská Ostrava is located today; the Oder river, which now flows north, was then a tributary of the Morava, which flows south into the Danube. Here the famous wide "Moravian Gate" stood open to the men arriving from the East, and through this gate many peoples have passed since diluvial times under the impulse of natural conditions. This Eurasian or rather Asio-European migration line along the Dniester, Visla, Oder, Morava, and Danube towards the Rhine, branching out in Southern Germany and Western Europe, has been completely reconstructed on the basis of such great diluvial stations as Kišla Nedzimova on the Dniester in Bessarabia, Předmost and Dolní Věstonice in Moravia, Gudenus Cave, Willendorf and Aggsbach in Austria and other sites farther westward towards the Rhine. Most of the stations along the Danube are as yet unknown.

The largest stations are in Moravia, where we know about two hundred of them. Instead of asking where fossil man lived in Moravia, one might ask, paradoxical though this may sound, "Where did he not live?" Moravia was largely one immense settlement of fossil man. There is a very simple explanation for this extraordinary palaeo-anthropological-geographical phenomenon, the massed overpopulation of a small territory in diluvial times, which compares with the population of that classical area on the Vézère river in France (Les Eyzies en Tayac and environs). These men were hunters. Due to the movement of glaciers, herds of various animals had been squeezed into Moravia: mammoths, woolly-haired rhinoceroses, bison, aurochs, muskoxen, giant deer, reindeer, Saiga antelopes, ibexes, as well as their enemies: lions, tigers, leopards, cave-bears, hyenas, and jackals; smaller animals such as roe, snow hares, polar foxes, wolverines, steppe- and snow-hens. We have dug them up by the hundreds, from the largest to the smallest, reconstructing entire skeletons, from

¹ Editor's note: By *diluvial*, Professor Absolon means what is more often in America called Pleistocene.

the mammoth (cf. H. F. Osborn's *Proboscidea*) to the *Lagomys pusillus*. In this respect Moravia was a "Promised Land" in diluvial times, and became the Eldorado of hunters.

The hunters' invasion was not realized all at once, but in very long intervals. The fossil hunters settled here and there; later hordes caught up with their predecessors, who moved on towards the Danube and the West at intervals of hundreds and even thousands of years.

These men were carriers of a relatively high culture. They were not of the primitive Neanderthal type (*Homo neanderthalensis primigenius*), but belonged to another fossil race of Cro-Magnon man (*Homo sapiens fossilis*) with a far higher development. Twenty examples of this fossil man (adults and children, male and female) were discovered in 1894 in Předmost by K. J. Maška, others by Szombathy in Mladeč near Litovel. I discovered a complete skeleton (adult female) in Brno in 1927. We are completely informed about the anatomic-physiological characteristics of these races and even about their physiognomy, thanks to the unique discovery of a plastic portrait, which will be described in another article.

Wherever these prehistoric men lived, they left behind traces of their presence. camps, living quarters dug into the ground, very probably also wooden structures, fireplaces, huts, etc., covered since those days by mighty geological strata, which buried them deep in the ground, but at the same time preserved them miraculously for study by future generations — like so many diluvial Pompeiis.²

Because these invasions passed at enormous intervals and in different geological periods, the culture is not homogeneous, but corresponds to three phases of the later or Upper Palaeolithic which I have identified as follows: first phase, primitive or quartzistic Lower Aurignacian; second phase, developed or Upper Aurignacian; third phase, Lower and Upper Magdalenian.

I had to work hard and long before I was able to recognize the true character of these cultures. I arrived at my conclusions on the basis of extended excavations in some of the typical stations, in the caves of Pekárna and Býčí Skála, the subaerial stations of Předmost, Ondratice and Dolní Věstonice, and near the famous Spa Piešťany in Slovakia, and on the basis of a critical revision of the entire Moravian Palaeolithic period and studies of Russian, Rumanian, Polish, Hungarian, Austrian, Swiss, French, Spanish, North African, Belgian, Dutch, English, German, Finnish and other collections. Earlier, the experts had assumed that we had in Moravia cultures of the Lower Palaeolithic period: Chellean, Acheulean, Mousterian and younger Solutrean. The famous prehistorian of the University of Vienna. Moritz Hoernes (died 1904), was the godfather of the Moravian Solutrean; in keeping with the spirit of his time, he identified Předmost as Solutrean. This took place at a time when Aurignacian was yet unknown, before the settlement of the well known dispute of the Abbé Henri Breuil with Paul Girod about the development and the pre-Solutrean age of the Aurignacian. A disciple of Hoernes, Dr. Hugo Obermaier (died 1946), confirmed the culture of the Solutrean for Moravia, although the famous king of the eolithiophiles, Aimé Rutot (died 1933), had been the first to recognize Předmost correctly as Aurignacian.

It was much more serious that Obermaier, one of the leading European palaeo-ethnologists, was misled by the extremely primitive appearance of some quartz artifacts, especially points and scrapers which were very similar to, and morphologically identical with, analogous tools from the true French Acheulean and Mousterian. He therefore thought he recog-

² Cf. Sir Arthur Keith, *New Discoveries Relating to the Antiquity of Man*, chapter 24, "The Discovery of the Mammoth Hunters of Moravia," and chapter 25, "The Předmost Type."

nized these steps of the older Palaeolithic age in Moravia, and completely misdirected Moravian glyptology. In reality these artifacts are persistent types appearing as technological atavisms in the younger cultures, but being based in their teleomorphic finish on motives of convergence, not of descent. We shall return to this very difficult theme when we analyze the ancient Aurignacian remains from the Býčí Skála Cave. These stone tools of the Upper Palaeolithic and often even of recent cultures (Tasmanian, Patagonian, Old Indian, etc.) give the erroneous impression of Old-Palaeolithic Neanderthaloid cultures in Russia and Siberia. We therefore have to disregard all Obermaier wrote about this theme in his well known book on prehistoric Spain, so far as it concerns Central and Eastern Europe; this does not mean, of course, that I intend to lessen the merits of this eminent scientist. I have for years advocated the brilliant views of Paul Sarasin on Mousteriols and Acheuleoliths, i.e. artifacts of the younger periods which mimic the characteristics of the real Palaeolithic artifacts of e.g. the Mousterian.

A task of equal importance in the stratigraphical exploration of the six localities in Czechoslovakia mentioned above was the typological examination of thirty of our larger and more important Palaeolithic and Neolithic stations and the critical revision, referred to above, of the entire material (about 300,000 silexes). This examination was made with the help of my disciples and according to my own system. The revision was extended to include the group of discoveries of the famous Gudenus cave deposited in the Vienna National Museum. I collected the results of this work, extending over twenty-five years, in manuscripts including over twelve thousand expert drawings; unfortunately these have not been published in these difficult times, although, according to general opinion, they could have a beneficial effect on the development of international glyptology. The purpose of these laborious and expensive studies was the comprehension of the polymorphism, variety, and technological methods of stone artifacts fabricated by our diluvial hunters, as well as a complete listing of all their forms and an analysis of their functions.

There is a divergence of opinion concerning the geological period in which the migrations to Moravia first occurred. I believe that it took place in the third interglacial period, and that the invasion culminated in the occupation of an isolated small range in southern Moravia called Pavlovské Vrchy (Pollau Range). There a diluvial "city" arose, the greatest cultural center of prehistoric Central Europe, which has been called "the diluvial Pompeii" by Sir Arthur Keith. There were formed the very beginnings of sculpture, painting, music and technology in daily life.

Before 1922 nothing was known in scientific circles of this enormous Central European station. It extends over an area of 1,100,000 square meters, of which I excavated some 3,000 for the Moravian National Museum, with the exertion of all my forces and after overcoming manifold obstacles. This work took place between 1924 and 1938 when it was interrupted by the political crisis. If continued at this snail's pace, the 523rd generation of our successors would complete the task around the year 7432 — truly a tragi-comical situation. Chiefly responsible for this unfortunate situation was the lack of funds.

Apart from the geological and stratigraphical location and the typological analysis, palaeo-biological elements (the fauna of an epoch) are important for the determination of a certain cultural phase of the Palaeolithic Age. It cannot be denied that this is one of the most difficult problems and that here most errors are made. The great Hungarian expert, Dr. Th. Kormos came to the conclusion, based on his own very conscientious researches, that the presence of certain animals had no significance for the determination of material cultures of the Miolithic (according to the terminology of Menghin), because these forms

of animal life exist concurrently in all cultures. I am of the opinion that Dr. Kormos is right, but relatively, not absolutely. Not certain specific forms, but the number, the quantity of certain animals plays a part, and thus I consider the cave-bear and the rhinoceros as type-fossil for the Lower Aurignacian, the mammoth for the developed or Upper Aurignacian, and the reindeer and the wild horse for the Magdalenian. We are returning to the classification used in the 1860's for the Palaeolithic age: "the periods of the cave-bear, mammoth and reindeer hunters."

It is obvious that the early Aurignacian must form the bottom layer in a stratigraphical sequence; it is particularly well developed in caves and also characterized by minerals. The artifacts were made of quartzes and quartzites, materials which the cave-bear hunters found right on the spot. This is why we also call this period Quartzite-Aurignacian. In this phase the amazingly large artifacts developed, which I have called "gigantoliths" in a richly illustrated monograph. The central layer of a complete stratigraphical sequence is the Upper Aurignacian, but the thickness of this culture in the caves bears no relation to the size in the subaerial Loess stations. It is up to ninety percent Loess culture and it seems that the mammoth hunters withdrew to the caves only in winter. They already made their artifacts from varied materials, imported from greater distances: jasper, rock crystal, chalcedony, opal, etc.

It is remarkable that the next people, the reindeer hunters of the Magdalenian age, are limited in our region to caves, into which they were pushed by the deterioration of climatic conditions. In Moravia, Slovakia, Hungary and Austria there is no subaerial Loess Magdalenian; J. Bayer, in opposition to Obermaier, was the first to determine this, but he erroneously extended this thesis to all of Central Europe whereas it is true only for the above-mentioned countries. In the course of my scientific journeys I was able to establish that the subaerial Magdalenian begins in Thuringia in the Saale river plains. The polemic of Bayer against Dr. Padtberg about the age of the station of Munzingen in the Black Forest was therefore quite superfluous. This station, which has been known for a long time, is not Aurignacian, as Bayer assumed, but pure Magdalenian. In Moravia and Austria the Magdalenian is a direct continuation of the higher Aurignacian, but it is distinct typologically as well as through the development of a great diversity of certain artifacts, e.g. very fine drills. The main difference lies in the tremendous development of the bone industry in the Magdalenian culture.

The proper relationship of the many forms of Magdalenian stone artifacts remains the most difficult problem of our glyptology. However, we can deduce from our present knowledge that the Upper Aurignacian and the Magdalenian are subdivisions of one main culture existing in different epochs. The length of the period during which the three phases of the Upper Palaeolithic Age developed in our region can be estimated, in agreement with Professor Soergel, at approximately 80,000 years, though I fully realize the uncertainty of such an estimate. One thing is certain, namely, that our diluvial cultures perished suddenly around 15,000 B.C. There is a hiatus of several thousand years which separates the Upper Magdalenian completely from the oldest phase of the Neolithic (the volute ceramics) which is dated about 4,000 B.C. This gap shows only insignificant traces of today's forest fauna in its lime stratum, but is completely devoid of any trace of the presence of man. Therefore we do not have any Mesolithic remains in Moravia to this day.

Why did this lacuna arise—a chasm which neither the palaeo-ethnologists nor the prehistorians have been able to bridge? What caused the destruction of fossil man and his remarkable culture? If it was merely a climatic catastrophe, it must have been of gigantic dimensions and universal, since, along with man, the accompanying diluvial animal world

disappeared completely, including mammoths and rhinoceroses, giant deer, bison and aurochs, cave-bears, lions, tigers, hyenas, Saiga antelopes, herds of innumerable reindeer, wild horses, etc. Such a tremendous cataclysm had to have as its cause natural events of equal size and importance. We shall return to a detailed examination of the hiatus, and to its relation to the Atlantis problem, in later articles dealing with the exploration of the Pekárna and Býčí Skála caves in Moravia.

Palaeo-ethnology and anthropology are recent sciences. The Viennese Anthropological Society was founded in 1870 by the great Viennese physician Baron Rokytansky, partly because of the great wealth of prehistoric discoveries in Moravia. At that time Henry Wankel (1821-1897), a simple country doctor, was active in Moravia; in 1888 he was called the "father of Austrian prehistoric archaeology" by the immortal Danish zoologist, Japetus Steenstrup, discoverer of the *Kjækkenmøddings* and the change of generations. In 1867 Wankel discovered Palaeolithic cultures for the first time in Europe, on the classical site of the Býčí Skála cave. He even interpreted these cultures correctly and distinguished two typological phases: the older phase dating from the cave-bear hunters equated with the French Mousterian, and the younger phase dating from the reindeer hunters which he equated with the West European Magdalenian. In the latter stratum he discovered the first human fossil skeleton in Central Europe, a female of the Cro-Magnon race. This he described in an accurately read stratigraphical interpretation of five superimposed strata in which he even identified the hiatus separating the Holocene from the Pleistocene stratum below. The date of his discovery and correct interpretation - 1867 - can be duly appreciated by students of the history of our science. Wankel himself did not realize the importance of his discovery. He considered it to be of local importance only, so that the leading French palaeo-ethnologists had no knowledge of it. Wankel's merits were fully appreciated only by our generation; a similar fate was shared by another famous Moravian scientist, Gregor Mendel, a contemporary of Wankel.

Wankel made another sensational discovery in the Býčí Skála cave: a funeral site of a chieftain of the Hallstatt period which contained unique treasures including the oldest cast iron object in the world, a cast iron ring dating from the sixth century B.C. Wankel, one of the founders of the general Central European speleology, biospeleology, palaeontology, and hydrography, also built in 1850 the first cenozoic laboratory in Blansko (Moravia). There he reconstructed complete skeletons of cave-bears, cave-lions, cave-hyenas, and other animals. In 1879 he discovered Předměstí which later acquired world-wide fame. In 1884 he founded a national museum in Olomouc, the second city of Moravia, which possesses one of the greatest prehistoric collections in Central Europe.

I have had to deal with Wankel in some detail since it was his research which laid the foundation for the later exploration of Palaeolithic Moravia. His example exerted great and lasting influence. He was followed by a large number of disciples in Moravia who did prehistoric work in many fields. Papers by two of them, K. J. Maška and M. Kříž, were published in the Paris journal, *L'Anthropologie*. Maška and Kříž, both of whom died in 1916, explored Předměstí, and the latter also the caves of Kůlna and Pekárna.

As the successor of these three men, I started in 1917 to build up a special cenozoic department in the Moravian National Museum in Brno, in which were concentrated the collections of Maška and Kříž and all other Palaeolithic collections which had been in private hands. Since 1922 I have organized systematic excavations on the great Moravian sites. In 1928 I created a special research institute in Brno, "Anthropos," under the patronage of the provincial government.

I should like to mention some international highlights of our work in Moravia. In 1923

the Abbé Henri Breuil, the representative of international palaeo-ethnology and the teacher of whole generations, visited us for weeks of study. In 1924 the Third Congress of the Institut International d'Anthropologie took place in Brno, attended by Dr. Capitan, Dr. Pittard, Count Bégouen, Kleiweg de Zwaan, Milles Burkitt, Dorothy Garrod and over seventy leading prehistorians of many nations. We received a strong impetus from the repeated visits of our American colleagues during the late twenties: Mrs. Mitchell Carroll, Dr. W. F. Jakobs, Dr. Paul Gattes Kreider, Dr. G. W. Riley, Prof. George L. Collie *et al.* In particular there was the participation of the American School of Prehistoric Research in association with the Archaeological Institute of America, led by Professor George Grant MacCurdy and his assistants including Dr. Henry Field, in the excavations at Dolní Věstonice, Pěkářna and Předmost. In a critical discussion they made important contributions to the clarification of disputed questions, especially the difficult problem of the relation of the Aurignacian cave to Loess stations.³ Their visit left a profound impression in Czechoslovakia.

Travelling south from Brno, the capital of Moravia, towards Bratislava, the capital of Slovakia, one cannot help but notice an isolated small range of hills rising suddenly from the southern Moravian plains (see map, pl. iv, A). This is called the Pollau Range (Pavlovské Vrchy). Formerly it was believed that this elevation, which covers merely 122 square kilometers, formed part of the Alps; but we now know on the basis of their geological structure that these hills belong to the Carpathians. This small Karst region, consisting of Jurassic limestone, had been popular with local tourists and naturalists, but acquired world fame only in our generation, when one of the greatest Palaeolithic stations in the world was discovered there in 1922 and explored by me since 1924.

I intend to devote a special article to the history of the exploration of this gigantic station which has been named after the nearby village of Dolní Věstonice (Unter-Wisternitz), where we had our headquarters and laboratory. The systematic exploration of every square yard of the site, by which I had intended to arrive first of all at a later palaeo-ethnological reconstruction of the station, produced immense quantities of relics of the culture of the Central European Upper Aurignacian. Enormous fire sites and extended accumulations of mammoth bones (diluvial *Kjokkenmøddings*), gave a new confirmation of the formerly disputed question of the contemporaneity of mammoth and man (Japetus Steenstrup, Othenio Abel). We found great quantities of stone and bone implements, stone-workers' shops, ornaments, fighting and hunting weapons, extensive palaeontological material, heads of fossil man, and in particular *diluvial ceramics*, a complete innovation for palaeo-ethnology. When our workmen showed me the first of these ceramics, the small head of a bear (pl. iv, B), on August 21st, 1924, I was so taken aback that I thought at first that this was due to the secondary infiltration of a Neolithic layer into the diluvial, so strongly did we think of ceramic objects as an important characteristic of the Neolithic culture. But when a commission of three members examined the whole situation on the following day, the depth of the undisturbed layer in which the bear's head had been found left no doubt that it came from a primary diluvial stratum. In this way the tiny sculpture became the beginning of one of the most interesting chapters of recent palaeo-ethnology, for we subsequently uncovered a whole collection of diluvial sculptures.

The very expression "diluvial ceramics" would have been considered absurd and a flagrant error by all prehistorians before the discoveries at Dolní Věstonice. Since Evans'

³ Cf. the third monograph of D. Věstonice, 1945, pp. 10-13, 16, 19, 24-25.

categorical statement about the absence of pottery from Palaeolithic deposits, either no mention has been made in English manuals of Palaeolithic ceramics (Munro, Sollas, Burkitt), or recognition has been refused to them (Macalister). Therefore ceramics were considered a nonexistent anachronism for the diluvial, and the forming period of objects from clay was held to be an accomplishment of the Neolithic Age. Now we know that the mammoth hunters had discovered it much earlier in order to give expression to their artistic impulses.

Some of the sculptures found in Dolní Věstonice represent animals; others are anthropomorphic statuettes. The animal figures are all ceramic, the anthropomorphic figures are either ceramic or made of mammoth ivory. The heads of animals were the most common: three bear heads, two each of lions, wolverines, ice foxes, rhinoceroses, reindeer, wild horses, owls, etc. There are whole figures of bears, wolverines, bison and mammoths, miniature plastic figures such as bears 74 and 47 mm. long, a beautiful mammoth measuring 40 mm. (pl. IV, c), the wolverine of Předmost 45 mm., etc. Some of the sizes of the animal heads are: bear 30 mm., reindeer 38 mm. (pl. V, A), rhinoceros 40 mm. (pl. V, B), ice fox only 15 mm. — our smallest sculpture.

The material of which these statuettes were made is always the same: silicated and carbonized bones, such as ivory, ground to dust, mixed with Loess and grease to form a kneadable substance — a diluvial artist's paste. The chemical formula of this material is CO_2 , S_2O_2 , PO_4 , Ca , Fe , Mg . Originally soft, then dried in fire, these statuettes became fossilized into the hardness of stone in the course of tens of thousands of years.

All these statuettes were masterfully true to nature, so that in spite of the smallness of the object one can identify the animal represented at the first glance only one head of a reindeer has been ideoplastically, geometrically stylized through the use of a decorative motive, parallel, deeply engraved ridges. This figure (pl. V, c) looks somewhat exotic at first sight, and it was entered as a "crocodile" into the work records. An artistic-morphological analysis makes it possible to identify this figure beyond a doubt as the head of a reindeer.

The head of a lioness (pl. V, d) has been modelled in such a masterly fashion, in spite of its small size, that it has been called "a rare gem, the crown of the world's diluvial plastic art." Scientifically of the greatest value are two heads of cave-bears, a pair of sisters, equally large and modelled in the same fashion, so that there is no doubt that the artist duplicated his own work. They were found next to each other on the site of the "mystical hunters' cult" mentioned below, together with some dyestuffs, in August 1934. Just because these two heads have been formed after the same fashion, it is possible to recognize a remarkable tendency in one of them. The first has been modelled bilaterally in symmetrical proportion, while the second (pl. V, E) is true to nature only on the right side, being strangely disfigured on the left side; it bears an artificial wound, deep holes in the place of eye and temple and above the ear. It may have been the intention of the primitive hunters to correct the fortune of the chase, so that they would be able to catch their prey by a mighty spear thrust into the left eye or temple. Through a remarkable coincidence I have seen a perfect analogy in a parietal drawing discovered by Professor Bégouen in the miraculous cave in the Pyrenees, "Des Trois Frères." There we can admire a stoned cave-bear, bleeding profusely from nostrils, eye and temple (see fig. 1). Motives of the same ideology, a drawing in the Pyrenees, and some 800 miles away as the crow flies, a statuette in Moravia — the same human-kind, widely separated in time and space.

Most of these statuettes were discovered in one area in the years 1933 and 1934. It is a

particularly exposed spur of land, a location which attracted my attention from the very first day, and I certainly was not disappointed. On an area of about 400 square meters, not deep below the surface—the Loess had been blown away on this exposed point in the course of time—there was an amazing number of stone, bone and ceramic objects, dyestuffs and scrapers, necklaces and perforated teeth, a beautifully ornamented spoon of mammoth ivory 40 cm. long, and other implements. In a burned layer, mixed with carbonized bones, there were several Venus statuettes, also a male figure, which is very rare in diluvial art, and finally an extremely important amulet, a perfect artificially perforated fossil human front tooth, probably a war trophy.

The heart of this area was an irregularly shaped fire site of 107 square meters. Discoloring made it possible to identify the outline of the site quite accurately. At the fire site itself and in its surroundings were found hundreds of these strange objects, including ten complete ceramic pieces: bears, a legless whole figure, lions, mammoths, horses, the "crocodile" reindeer (pl. v, c), a snow-owl and a handful of unfinished, sketchily modelled forms. It looked as if fossil man had scattered these precious objects around the fire place with re-

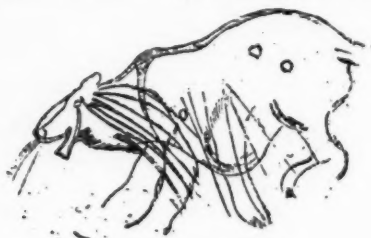


FIG. 1. WOUNDED CAVE BEAR

peated swings of his hands. I emphasize that rubbing stones with red and yellow dyes lay in the center of the fire place, which is always significant. Many of the bone objects were dyed red. There were hundreds of stone artifacts of exquisite quality. A description of this fire site and all the objects found there alone provides material for a richly illustrated monograph. In these circumstances I feel justified in assuming that we are facing here the scene of a mystic cult of the mammoth hunters, the full significance of which can only be appreciated within the frame of an overall picture of the gigantic station, where we found several such sites.

Does the fact that most of the animal sculptures are only heads have an intentional significance? I cannot decide this question, but would like to point out the following. The well known Magic Staff⁴ found in the Abri Mege in Teyjat near Nontron, France, shows a strange drawing of a horse. Only the front part, with just one front leg without hooves has been drawn, leaving out the greater part of the body and three legs, although the artist had plenty of space for a complete drawing. This is no accident, but an intentional reduction of the drawing. It shows the influence of a notion analogous, for instance, to that of the Eskimo, who draw human figures reduced to head, chest and arms, and reindeer without antlers or legs. These are magic, morbidly naive notions going back to shamanistic influences.

⁴ Masterfully interpreted in 1909 by L. Capitan, H. Breuil, P. Bourinot and D. Peyrony in the *Revue de l'Ecole d'Anthropologie*, xix.

We shall say no more about the question of the bodiless heads at this point. However, we can be much more certain about the meaning of the legless statuette of a cave bear (pl. v, f). It is a perfect statuette without the four legs, which were certainly not broken off. The diluvial hunter never formed the legs with the body, but attached blunt stumps to the rump. We know from comparative prehistoric and recent ethnology that this fact has a deeper significance. The unsophisticated diluvial hunter wanted to achieve remote control over his chase by magic, by depicting a certain phenomenon: his grim foe, the cave-bear, was not to escape him, being legless!

We can see how important for our science was the discovery of diluvial ceramic sculpture – not only for the morphology of art, but also for ethnology. With its help we have been able to penetrate a little into the spiritual life of the mammoth hunters. After the first discoveries of these statuettes it was not quite clear whether or not they were children's toys, but now we are certain that they were connected with a cult.

In Moravia the ceramic statuettes are not limited to Dolni Vestonice; recently Předměstí also has furnished a precious complete statuette of a wolverine.

In the course of our work we also found geometrical line drawings in our giant station. They are few in number, simple in execution and do not compare with the sculptures in number or quality. We see that plastic art is older than drawing. According to the ontogenetic laws children also start with their plastic toys and only later the talented ones develop their inclinations for drawing. The dominant position of sculpture at the very beginning of art appears strange in other times. The later nineteenth century concentrated its energy so completely on painting, that no interest remained for sculpture. Perhaps such a change of artistic emphasis took place for the first time between the Aurignacian period and the Magdalenian.

Students of cultural history have frequently expressed surprise that the craft of stone-grinding had not been discovered by Palaeolithic man in the diluvial stone implement industry. *Mutatis mutandis* we may express surprise that the highly intelligent mammoth hunters did not use their skill in the modelling of statuettes for simpler and more useful things, for instance household implements, especially vessels. The evolution of the Moravian diluvial ceramics is of great importance for the evolution of proto-Neolithic culture. Dr. O. Menghin shares the opinion that this free modelling method is the beginning of ceramics. This is important, because the question of the origin of ceramics is one of the darkest problems of palaeo-ethnology. The oldest proofs of ceramic art with an established age are from the Belgian early Campignian and the Brandenburg early Tardenoisian; obviously ceramic art was not invented there, but must have had its precursors in preceding periods.

It is also a known fact that there have been several announcements of discoveries of Palaeolithic pottery in Italy, France, Belgium, more recently also from England and Germany. From Italy U. Rellini (1920), U. Botti and C. de Stefani (1916) announced potsherds from Palaeolithic strata of various caves, which claim was rightly refuted by R. Vaufray (1928) and H. Obermaier (*Reallexikon*, 1926). Similar discoveries in France and Belgium have been treated very critically by J. Dechelette in his *Manuel d'archéologie préhistorique*, chapter vi, "La Potterie à l'époque du Renne," pp. 169–171. On the other hand, Palaeolithic pottery was considered assured by the Belgian scientists A. Rutot, J. Fraipont and G. Engerrand, especially the finds in the Neanderthal layers of the Spy cave; this was certainly erroneous. I must recall, however, that during the excavations of H. Martin in La Quina, another Neanderthal station, the well known prehistorian E. Tate discovered in the undisturbed Mousterian layer a perfect fossilized loam spheroid, which could only have been

made by man and should be considered to be the oldest ceramic object in the world. Of course, a spheroid is not pottery. It is interesting that in 1908 Rutot intuitively, without proof, placed the beginning of ceramics in the Aurignacian, for which he was severely taken to task by M. Hoernes. Our ceramics from the Moravian Aurignacian culture certainly vindicates Rutot, with whom I conferred many hours in 1930. He had genius, but could also err very badly (Eolithism).

We already mentioned the negative attitude of the British scientists towards "Palaeolithic pottery." In spite of that, J. P. T. Burchell and J. Reid Moir announced the discovery of a late Palaeolithic ceramic from Ipswich and Swanscombe with great stratigraphical certainty. I personally studied this stratigraphy on the spot in 1931 together with J. Reid Moir and G. Mainard, and have found it unquestionable; but perhaps all three of us were wrong.

In Germany, Professor W. Freudenberg claims to have found a ceramic object in the early diluvial of Luetzelsachsen near Weinheim, and he defends the geological age of this supposedly oldest ceramic in the world. It cannot be doubted that a very deep frost fissure once reached as far as the early diluvial layer and that the funnel-shaped clay object fell from the upper Neolithic strata to the bottom of the fissure, to be enclosed later by subsequent falls of parts of the early diluvial strata.

Now let us return once more to France. The telegram is famous which Count Bégouen dispatched in October, 1912, to Emile Cartailhac, when he discovered his clay bison in the cavern Tuc d'Audoubert in the Pyrenees: "Les Magdaléniens modelaient aussi l'argile." Since then, Norbert Casteret found statues and bas-reliefs in the Gautier-Montespan cavern; later Felix Trombe made similar discoveries in a different gallery of the same cave. In 1930 Jauze and Mandement discovered new objects of modelled clay in the Bedeilhac cave. Here we have artistic ceramics of the Upper Palaeolithic as a universal feature of the Magdalenian period in the Pyrenees. In Dolní Věstonice we have a universal ceramic art of the Aurignacian period. I am convinced that ceramics, especially artistic objects, will be discovered in other Upper Palaeolithic stations. It is certain that some were found in Kostenky in the Ukraine. P. P. Efimenko mentions "products of firm, blueish clay." At the Twelfth French Prehistoric Congress in Toulouse, the Bégouens, father and son, showed a small Magdalenian animal statuette which was certainly modelled of clay. It came from the Trois Frères cave, which is becoming of prime importance due to its innumerable wall drawings, which Abbé Breuil is laboriously deciphering at present. I could find no difference between that statuette and the statuette discovered in Dolní Věstonice.

From Moravian and Pyrenaic ceramic objects we have proved the assumption that the origin of ceramics is to be found in the Upper Palaeolithic period. It must be observed, however, that these are artistic objects and not vessels. The latter appear to have been a spontaneous discovery of the Neolithic period. Even under the most favorable conditions fragments of pottery can be found only rarely and sporadically, and statements such as those concerning the discoveries in the Spy cave must be examined rigorously.

From the anthropological point of view the discovery in the second year of our excavations in Dolní Věstonice of a larger anthropomorphic ceramic Venus statuette was particularly important. In another article we shall deal critically, on a comparative basis, with the interesting theme of diluvial portrayals of women, using new material and new angles.

A THERIOMORPHIC REPRESENTATION OF HEKATE-ARTEMIS

RUDOLPH REITLER

Plate VI, A

THE following little study was called forth by an archaic Greek scarabaeoid from my collection, bought in Lattakia (Syria), which is remarkable for its high artistic qualities as well as its unconventional design.

The seal is made from hard black stone measuring in its original condition 15×12 mm. with a height of 7 mm. Its back is damaged on both ends of the bore hole, obviously due to the removal of a ring of precious metal, but, fortunately, the design is almost perfectly preserved. The many details, hardly visible in the original size, are brought out only by enlargement (pl. VI, A).

The design represents a female dog in the moment of whelping. The animal is lying in the characteristic position, well known to every dog breeder, with the tail lifted towards the back, both forelegs and one hindleg cramped in the ground, the other hindleg raised and the head turned attentively backwards to the exposed vulva, ready to snatch the arriving puppy and to liberate it with her teeth from the umbilical cord and the amniotic membrane in which puppies are born. The bulging abdomen presses the ribs outwards and shows two superimposed rows of teats, five in each row. The face of the animal, with the lips retracted backwards and the eyes directed to the abdomen, expresses at the same time strain and attention—a mixture of opposing emotions quite typical for the act of whelping in dogs.

The whole representation betrays an intimate knowledge of canine behavior and is masterly executed. In spite of its very small size all the details are meticulously worked out as, for instance, the expression of the muzzle made by the curved and retracted lips, the mane on the neck, the collar, the claws and the shaggy tail. But in contrast to the otherwise correct proportions, the size of the teats is definitely exaggerated. The picture is set in a very fine cable-border frame and it should be noted how an equilibrium is achieved, within the given space, by the movements of head and lifted hindleg, enclosed by the graceful curves of neck and tail. The linear composition of the whole design is based on two crossing S-shaped lines (one formed by the neck and the resting hindleg, the other one by the tail and both forelegs), a composition scheme favored by seal cutters since early Sumerian times. According to its style our seal belongs to the Eastern Greek (Ionian) glyptic of the end of the sixth century B.C.

The breed of the dog can easily be identified by the fox-like head on a sturdy body with moderately long and rather slender legs. It is the "Lacedaemonian dog" mentioned by Aristoteles as a hybrid of fox and dog (*De part. anim.*, viii, 27) and probably identical with Xenophon's ἀλωπεκίδης (*Kyneget.* 3). Representations of this breed are found on vase paintings of the sixth and fifth centuries B.C.¹

But does the picture really mean nothing else than a whelping Lacedaemonian bitch? Subjects from the daily life of animals apparently without any magic or religious purpose, are found on seals only from the classical period onwards. In earlier seal pictures of this

¹ Cf. *Encyclopédie photographique de l'art*, vol. ii, (6th Century, B.C.); and J. D. Beasley, *JHS*, xxxiv, Musée du Louvre, Paris (1937), pp. 284, 294, and 299 1914, pl. xv (5th century, B.C.).

kind the magic element is almost never missing; they are mostly either apotropaic or they represent deities symbolized by their attribute animal. The picture on our seal has certainly no apotropaic character; but if we look for a goddess who could be represented by a she-dog, we easily find one, namely, Hekate.

Hekate is intimately connected with the dog. Not only that it is her sacred animal offered to her as a sacrifice; the original identity of deity and attribute animal seems to have persisted particularly long in her case as she is sometimes addressed as "black she-dog" (κύων μέλαινα), and in Kolophon black dogs were used for her sacrifice.² The black color associated with Hekate is probably indicative of her chthonic fear-inspiring character which is most obvious in her connection with magic, ghosts, cemeteries and the celebration of her mysteries in the Zerynthic cave (Samothrake). This attribute of blackness finds its expression in the black stone of our seal which is unusual, as most scarabaeoids of this period are either of bluish-white chalcedony or of gaily colored red or green stones (carnelian, jasper etc.).

But there is also a brighter aspect of Hekate's chthonic character which would justify her to be represented in the act of delivery, namely, her function as goddess of birth. This is particularly pointed out by Hesiod (*Theogony* 450, 452) and reflected in her epikleseis as Εἰλειθυία, Γενήτιλλίς, Γενητική, Θρεπτική.³ All chthonic deities are essentially connected with fertility and the female ones are, therefore, identical with the primeval mother-goddesses. In this capacity Hekate was at an early period confounded with the Ephesian Artemis, the "magna mater" par excellence, with whom she shared also the motherly epikleseis.⁴ Now, it is well known that this goddess was represented with many breasts and it appears hardly far fetched if we connect this feature with the overemphasized teats of our she-dog. Thus, we can interpret this small masterpiece of Greek glyptic art as a theriomorphic representation of Hekate-Artemis in her motherly aspect.

This interpretation enables us to explain some pictures on seals from the same period which have been hitherto misunderstood. I mean the representations of animals in postures described as "rolling over the back" or "biting under the hindleg." Both postures are essentially the same as seen in our dog, namely, sitting or lying with a hindleg uplifted so that the genital region is exposed, a position of delivery not only in the canine but also in the equine and feline genera. Not less than four seals of this kind are reproduced in the British Museum Catalogue.⁵ Two horses (nos. 446 and 486, the first one erroneously denoted as a mule), one she-ass (no. 451, also called "mule"), all three lying, and one sitting lion (no. 419). The subject was, therefore, not uncommon at this time. Furtwängler suggested that such a gaudy behavior of horses might have been considered as a lucky omen⁶ but I cannot see why that should be so. He either did not know the sitting lion with the raised hindleg or he has missed the connection of this picture with the "rolling horses."⁷ In view of the most obvious feature common to all these pictures, however, the exposure of the genital

² Heckenbach, s.v. "Hekate" in *RE*, xiv, 1912, pp. 2770 f.

³ *ibid.*

⁴ It should be noted that Artemis is represented on an archaic Boeotian vase as a woman delivering a child; see Wernicke, "Artemis" in *RE*, iii, 1895, p. 1414.

⁵ B. H. Walters, *Catalogue of the engraved Gems and Cameos, Greek, Etruscan and Roman in the British Museum*, London, 1926.

⁶ A. Furtwängler, *Die antiken Gemmen*, vol. iii (Berlin, 1900), p. 106.

⁷ Similar errors might have occurred already in antiquity and it is quite possible that one or the other later representations of a horse in this posture, although derived from the older meaningful type, might really represent nothing else than a horse lustily rolling over on its back. Misunderstandings of this kind, caused by the loss of earlier symbolic values, are not rare, particularly in Greek glyptic art.

region, an interpretation as symbolizations of fertility is more probable than any other one. At least some of them may have been influenced by the notion of Hekate in the artists' mind because horse and lion are also known as attribute animals and epikleseis of this deity (Porphyrios, *De abstin.*, iv, 16: τὴνδ' Ἑκάτην ἵππον, ταῦρον, λέαιναν, κύνα . . . προσηγόρευσαν).⁸

VIENNA

RUDOLPH REITLER, M.D.

⁸ On the possible meaning of the change in gender within this sentence, see P. Philippson, *Thessalische Mythologie*, Zurich, 1944, p. 77.

A NEW SKYPHOS BY THE PISTICCI PAINTER

LUDWIG BUDDE

Plates VI, B and VII, A

A SKYPHOS in the Gustav-Lübcke Museum in Hamm in Westfalia, a work by the Pisticii painter,¹ can now be added to the list of known skyphoi by that painter. These show a single figure on each side, usually Pan or a silen, and also women, maenads, or youths. The new vase is from the Lübcke collection, and now bears the inventory number 1551 at Hamm.²

On the obverse (pl. VI, B) is the picture of a youth in chiton and himation, leaning on his staff and facing right. His cloak is pulled up high in back of his head, his skull elongated and bald. On the reverse (pl. VII, A) a silen is depicted holding a thyrsus and wrapped in a wide robe made of shaggy woolen material.

On the grounds of stylistic similarities with a number of vases by the Pisticii painter, our skyphos may be attributed to that master. Characteristic is the painter's choice of subject; on this vase, as on most of his other works, the subjects are not taken from mythology and the composition is not on a large scale. A comparison of the silen with the maenad between two silens on a calyx krater in Bologna³ shows an obvious identity of hands: the poses of both maenad and silen are the same, both are almost completely covered by their robes, with only the heads showing. A certain angularity of profile is also evident in both figures, which is apparent especially in the rendering of elbow and knee. Folds are given in simple straight lines, and in both figures recurs the parallel arrangement of diagonal folds near the neck. The parallel lines below the silen's hip find a correspondence in the vertical strokes along the maenad's side. Similar are also the bold zig-zags of the folds at the borders. The concentric curved lines in the lower portion of the silen's robe are missing, it is true, in the maenad's, but they recur in the woman beside the figure of Eros on a krater in the Vatican.⁴ The drawing of the silen's bulbous nose, of his mouth and eye, find their best parallels in the drawing of a dancing Pan on a skyphos in Dresden:⁵ a thick curved line for the eyebrow, a curved stroke for the upper lid, and for the eye proper two strokes and a dot between. The lower stroke of the eye is bent, the dot somewhat elongated and oblique, whereby the face acquires a tense expression, which is a rare feature in the Pisticii painter's work. The baldness at the top of the head, reaching far to the back, the sketchily drawn and ragged beard, the mass of hair only slightly relieved at the edges, all this is in complete agreement with the other representations of this figure, which is a favorite with the painter and his circle. Compare, e.g., the silens dancing around a maenad on another krater in Bologna;⁶ the one on the left also bears a thyrsus similar to that of the Hamm silen. The feet, a weak point

¹ A. D. Trendall, *Frühitaliotische Vasen* (Leipzig 1938), 32, nos. 51 ff.

² L. Budde, *Gustav-Lübcke-Museum in Hamm in Westfalen, Antike Kleinkunst I, Griechische Vasen*, no. 7, plates 7-9 (Münster 1940, unpublished). H: .16 m, Diam: .18 m. Reddish clay, glaze black with metallic luster also on the inside, cracked in a few places. On the bottom, concentric circles. Foot ring glazed on the outside, walls bulging out near the middle, contracted above and below. Handles completely glazed. Re-

served line on body just above the foot. Under the pictures two circumcurrent reserved lines.

³ Trendall, *op. cit.*, pl. 3 b: calyx krater in Bologna (maenad between two silens).

⁴ Trendall, *op. cit.*, pl. 4 a: Vatican krater (woman next to Eros).

⁵ Trendall, *op. cit.*, pl. 3 a: skyphos in Dresden (dancing Pan).

⁶ Trendall, *op. cit.*, pl. 3 b: krater in Bologna (maenads dancing around a silen).

of the painter on other vases as well, are similar to those of figures on bell kraters in Bologna and Tarentum.⁷ Unusual are the angular back of the silen's head and the pendant porcine ears; for the latter compare the silen on a bell krater in Würzburg⁸ and silens on a Faliscan cup in the Villa Giulia,⁹ where the rendering of the hair of one silen and the shaggy coat of another are reminiscent of the Hamm silen. Otherwise the Pisticii Painter's silens are nude, as are those of other painters. For the rendering of the cloak compare the shaggy animal's skin worn by Artemis on the fragment of a skyphos in New York¹⁰ (by the Amykos painter who is very close to the Pisticii painter), and further the garment of Dolon on the calyx krater in London.¹¹

Very fine is also the imaginative drawing of the youthful figure on the obverse, especially the rapt expression of his face, a rendering of emotion very rarely found in Italiote art elsewhere. One might be tempted to call this expression modern, but there are no traces of re-painting. The hand of the Pisticii painter is evident in the details of this side also, especially in the drawing of the folds. Here the best comparisons are the curved folds of the central youth and the more delicate folds of the female fluteplayer on a bell krater in Boston.¹² Notable is the portion of the himation covering the youth's left arm, which is rendered in a manner characteristic of the painter. The motive is found, although in a less developed form, in the two left "mantled youths" on bell kraters from the Hope collection, no. 206 (2), and in Dresden, no. 352 (5).¹³ The Hope vase is closest in style to the Hamm skyphos, even in a minute detail like the figure-eight fold on the lower border of the himation. In general, however, the youth leaning on his staff, as well as the silen, are individual achievements of the painter and show his accomplished drawing and inventiveness.

The shape of the vase corresponds in all particulars to that of the Dresden skyphos: the offset foot profile, the slight concavity of the body above the foot, the whole profile of the vase, and the shape of the handles, are identical. Both vases further have double reserved lines under the scenes running around the body and a reserved line just above the foot ring. The ornaments, which are very fine, also are nearly alike, both the intertwined tendrils (on the Hamm vase their leaves are somewhat more succulent) and the two sprigs standing on both sides of each figure, with their buds shaped like drops.

The great similarities in posture and figure drawing which have been shown to exist between the silen of the Hamm skyphos and the maenad and silens of the Bologna bell krater on the one hand, and with the Pan of the Dresden skyphos on the other, place our skyphos in a period contemporary with these vases as an important and unusual work of good quality by the Pisticii painter.

⁷ Trendall, *op. cit.*, pl. 4, a and b: bell kraters in Tarentum and Bologna).

⁸ Ernst Langlotz, *Griechische Vasen in Würzburg*, no. 825: bell krater (silen with porcine ears).

⁹ *CVA*, Villa Giulia IV B 7, pl. 17, 5-6: Faliscan bowl (silens).

¹⁰ Trendall, *op. cit.*, pl. 9: skyphos fr. in New York

by the Amykos painter (Artemis).

¹¹ Trendall, *op. cit.*, pl. 14 a: calyx krater in London (Dolon).

¹² Trendall, *op. cit.*, pl. 1 b: bell krater in Boston (figure of youth in center).

¹³ Trendall, *op. cit.*, pl. 2, a-b: bell kraters Hope 206 and Dresden 352.

A NOTE ON EGYPTIAN MASONRY

FRANKLIN P. JOHNSON

THE LEGACY OF EGYPT (1942), edited by S. R. K. Glanville, contains a chapter entitled "Mechanical and Technical Processes," by R. Engelbach. The parts of this chapter that deal with masonry (pp. 142-154) are chiefly condensed from the earlier work of Engelbach and Somers Clarke, *Ancient Egyptian Masonry* (1930). The present note is concerned with matters in Chapter IX (pp. 96-112) in the latter book, which is unquestionably excellent. In attempting to trace the technical processes used by the Egyptians, the authors very properly compare the practices of mediaeval and modern masons, but the differences are great: "The student must divest himself of all preconceived ideas based on modern practice before he can hope to understand the various processes which, in Egypt, led to a finished stone building" (*Masonry*, p. 96). On the other hand, no notice is taken of the processes in Greek architecture, which might be expected to offer better parallels—not, of course, because of the lesser chronological gap, which is wholly irrelevant in questions of technique, but because Egyptian and Greek stand together in their emphasis on accurate stonework.

Thus Clarke and Engelbach seem to find it surprising that the face of a wall should be dressed after the stones were in place. A student of Greek architecture would think it remarkable if this should not be done, and indeed good masonry, according to the standards of the Great Pyramid and the Parthenon, could hardly be produced otherwise. In Zoser's pyramid, and often later, the blocks are well joined on the face of the wall, but behind it the joints are wide and filled with mortar. This corresponds to the Greek "anathyrosis," in that it reduces to a minimum the area in which joining surfaces must be accurately dressed. The Greek minimum is much larger than Zoser's, since in Greek work two adjoining blocks are in contact all around the edge or on three sides, with only the interior of the face hollowed; this is necessary in the absence of mortar.

A close approach to normal Greek anathyrosis is seen in *Masonry*, figs. 74-75 (p. 81). This is work of the Roman period at Philae and presumably shows actual Greek influence. The treatment is explained as "hollowing of joint to receive mortar." If that is really what it was used for, the Greek technique was taken over and adapted to a purpose quite different from its original one. The same explanation is given for the slightly hollowed horizontal surfaces of column-drums at Qalabsha (fig. 76), though this treatment is usual in Greek columns, where no mortar was used. Horizontal grooves are explained as escape-channels for the surplus mortar, since "by no means could mortar have been introduced through them." Perhaps that is true; but in the fourth century B.C. and later, the Greeks often used such grooves for the introduction of molten lead for the sealing of dowels; possibly they poured it through a funnel for impetus.

The authors give a good deal of attention to the question of how the Egyptians were able to make close joints between stones of irregular form. They think that it must have been necessary to try the stones against each other several times; and, since the stones were often large, it is difficult to understand how the adjustment was made. The methods proposed are ingenious, but apparently did not quite satisfy their discoverers; "the problem is indeed a perplexing one!" (*Legacy*, p. 150). Toward the solution of this problem I offer two suggestions; one is based on Greek practice, the other is not.

The Greeks had the problem in their abundant polygonal masonry, and a clue to their

procedure is given by Aristotle, who writes of "the lead strip used in Lesbian construction; for the strip is bent to fit the shape of the stone, and does not remain unchanged."¹ Evidently the lead strip was used in taking an impression of the shape of one stone and then the other stone was cut to fit the strip, and thus it was not necessary to try the stones themselves against each other. This process is very simple and involves no principle not familiar to the Egyptians, and it seems reasonable to assume that they used a process *substantially* the same. I do not undertake to say *exactly* what their process would be. Lead was used in Egypt from Predynastic times, but the discoveries do not indicate very extensive use.² Copper presumably would be the material, if any metal. The strips would be very thin, would be often reused, would be ill preserved in comparison with other metal objects and would be inconspicuous in excavation. It does not seem impossible that some material other than metal could be used.

It seems likely that a process essentially Aristotle's would be used for some irregular masonry in Egypt, and notably for pavements like that in the Valley Temple of Khafra (*Masonry*, p. 130). But the explanation is not satisfactory for such work as is illustrated in *Masonry*, fig. 110 and *Legacy*, fig. 28; at least it does not explain why such joints were used. Greek polygonal masonry was aesthetically attractive, or was a refinement of construction with rough and wholly irregular blocks; neither explanation is valid for Egyptian work with irregular rising joints in blocks not far from rectangular. However, there is one explanation that will account for such joints. The stone originally quarried, and to some extent shaped in the quarry, was very large, comparable to the obelisks of the Empire; this stone was sawed into blocks of more moderate size, for convenience in transportation and handling. When two blocks thus sawed apart were put together again, naturally they would fit, and the direction of their joining plane was a matter of total indifference. There would indeed be some advantage in perceptible deviation from rectangularity, since it would lessen the risk of losing the proper order of the blocks.

This suggestion is made without examination of the masonry in question. The Egyptian process of sawing is not too well known, but Petrie wrote of it: "The masons did not hesitate at cutting a slice of granite 90 inches long."³ From available evidence, it does not appear that there is any technical objection to the assumption that the saw was used as required by the hypothesis. Indeed it has already been suggested (*Legacy*, p. 150) that the blocks "were then pushed together and perhaps a saw-cut made between each pair to make a joint perfect." But to make a saw-cut between two blocks that are merely pushed together seems remarkable. By the hypothesis here suggested the joints are plausibly accounted for; they are not a "masonic fantasy" (*Legacy*, p. 154) but result naturally from the simplest way of cutting the blocks.

UNIVERSITY OF CHICAGO

FRANKLIN P. JOHNSON

¹ *Nicomachean Ethics*, v, 14; 1137 b, 30. Cf. Robertson, *Greek and Roman Architecture*, p. 387; Scranton, *Greek Walls*, p. 27.

² Lucas, *Ancient Egyptian Materials and Industries*,

pp. 200-202.

³ *Pyramids and Temples of Gizeh*, 1885, p. 29; cf. *Masonry*, p. 204.

ARCHAEOLOGICAL NEWS

THE NEAR EAST

ANN PERKINS, *Editor*

Plates VII, B-XV

IN the season of 1947-48 archaeological activities in the Near East were considerably increased and now seem back to normal in all countries except Palestine, where political disturbances prevented work almost entirely.

EGYPT

PROFESSOR S. A. HUZAYYIN of the Farouk I University of Alexandria has sent us a report on last year's work in the field of Egyptian prehistory. Between Helwan and Cairo at the site of MAADI Professor M. Amer continued his excavations at the Predynastic settlement; new material was found in the eastern sector, which is again proving of special value in illustrating the life of Egypt during the last few centuries which preceded the unification of Upper and Lower Egypt. Maadi is an exceptionally large village which may have continued from the Middle Predynastic almost to the rise of the dynasties.

AL-UMARI. South of Maadi but still north of Helwan G. Rustom of the Antiquities Department, together with De Bono, excavated the Neolithic site of al-Umari, which has been known since 1925 but never systematically excavated. Careful work was carried out in the cemetery, which yielded a number of undisturbed graves with the bodies invariably facing west toward the Nile. As we know that at Merimde on the west side of the Delta bodies were oriented towards the east, it now seems probable that in the Neolithic period bodies were always buried facing the Nile and the cultivated land. At al-Umari the excavators also found—apparently for the first time in Egypt—grains of what seems to be African millet; if final identification proves this point, it may furnish the evidence for the earliest cultivation of millet.

KOM EL-HISN. In the province of Buheira on the west border of the Delta in the important area

of contact between the cultivated land and that of the Libyan nomads, A. Hamada had a final season at Kom el-Hisn, a cemetery associated with the Middle Kingdom fort, in which a large number of graves were cleared. The importance of Kom el-Hisn is also enhanced by the fact that it is one of the rare sites preserved for us in the Delta, where sites are usually buried under the accumulating silt.

UNIVERSITY OF CALIFORNIA EXPEDITION.

During the autumn of 1947 the University of California sent an expedition to various parts of Africa with the aim of carrying out research work in the fields of paleontology (both general and human), archaeology (prehistoric and historic), anthropology, etc. The northern section of the expedition was to start in Egypt and proceed southwards to Kenya, the Congo, Rhodesia, and even into parts of the Union of South Africa. The southern section was to limit its field to the Union. The northern section was led by Wendell Phillips, but the scientific work was directed by several people invited to work in various fields. An invitation was extended to the Farouk I University of Alexandria to join the expedition and to organize the research in prehistoric archaeology in Egypt; the invitation was accepted and Professor Huzayyin was asked to undertake the work. Since he found it essential to limit his activities to one or two small areas and work there intensively, his work was a localized and somewhat separate phase of the expedition as a whole. It was limited to the Qatrani Desert north of the Fayyum and the Wadi el-Arish area in the northeastern part of the Sinai Peninsula. The expedition started with reconnaissance trips in September and October, 1947, followed by intensive work and excavation in November and December.

In the FAYYUM DEPRESSION there were certain

problems awaiting clarification. The depression had been the field of exploration and study both by physiographers and archaeologists for the last half century; but there were still many points of difference as to how and when it was excavated, what was the history of the men settling it, and the part played by this well defined area in the evolution of prehistoric civilization in northeast Africa in general. Well over forty years ago Beadnell put forward the theory that the depression was excavated by wind, perhaps sometime in late Tertiary times, and that consequently it was occupied by an inland lake (presumably connected with the sea) in late Pliocene or Plio-Pleistocene times. He found a number of so-called terraces near the northern edge of the depression which he considered as probably Plio-Pleistocene. About twenty years ago Drs. Sandford and Arkell re-investigated the eastern side of the depression and the Nile-Fayyum divide and put forward a new theory that the depression was excavated by water erosion with the water running in the direction of the Nile valley; but they did not offer a definite date for this action beyond the fact that most of it probably took place in Pliocene and/or Plio-Pleistocene times. At the same time Misses Caton-Thompson and Gardner, who worked on the inner and lower part of the depression as well as the desert tract immediately bordering the present Lake Qarûn (covering the bottom of the depression) to the north, accepted and supported the wind erosion theory of Beadnell, without offering a definite date for the cutting of the depression. In the early 1930's the Geological Survey of Egypt worked at certain points northeast and southeast of the depression, as well as in the Hawara channel connecting it with the Nile, and concluded that there was in the channel a rock sill or threshold between the depression and the Nile valley at a much higher level than that of the depression, and that at least the bottom part of the depression could not have been eroded by water flowing in the direction of the main valley.

QATrani ESCARPMENT. It was clear that if a new contribution were to be made in the Fayyum one would have to look for a new area where both physiography and archaeology could join hands in throwing light upon the problems of the Pleis-

tocene—its physiographic cycles and its culture sequences. Professor Huzayyin chose the Qatrani escarpment area marking the outermost and rather inaccessible high edge of the depression on its north side. It extended over some 200 kilometers, running roughly west-east and rising in steps to the surface of the desert plateau over 300 meters high. There he looked for Pleistocene formations and tried to determine their nature and date by digging sections and looking for flint implements *in situ*. It was possible to establish the following results:

1) The theory of a high inland lake in the Fayyum during the Pliocene or early Plio-Pleistocene can no longer be entertained. The formations occur at various levels rising in steps and all are quite different in nature from lake or sea deposits; lake deposits occur only in the bottom of the depression, below approximately the 42 meter level, and they belong to the Pleistocene (perhaps only the Upper Pleistocene?).

2) The theory of water running in the direction of the main Nile Valley and excavating the depression also cannot be supported. The formations along the whole area represent fillings of local basins over the steps of the escarpment bordering the Fayyum depression to the north. They dip, slope, and grade in material in all directions, and they are obviously the deposits of streamlets running in various directions according to the local surface and stratigraphy.

3) Altogether twenty-one groups of terraces were mapped; they are invariably formed of material which was originally broken under arid conditions and then transported over short distances and only partly graded and sorted by streamlets and the torrential action of seasonally running water. The material is partly sub-angular and contains wind faceted and thermally fractured pebbles and even angular fragments of ostrich egg. The formation of these terraces must therefore have been preceded by a dry interval and accompanied by moderately pluvial conditions.

4) Three levels of terraces could be distinguished, and it is possible to infer that the Pluvial period during which they were formed may have had three descending sub-maxima. The base level of these streamlets was not connected with the Pleistocene lake which covered

the bottom of the depression, and which was affected by both climatic changes (rainfall) and hydrographic connections with the Nile. Qatrani streamlets and their terraces may therefore furnish a more true—or at least less distorted—picture of climatic oscillations than even the beaches of the Pleistocene lake at the bottom of the depression.

5) It is most interesting that only one industry could be obtained *in situ* from the terraces of Qatrani, and this represents an almost uniform Upper Paleolithic facies of Levalloisian derivation. No older implements were obtained either *in situ* or on the surface, though careful and extensive search was made for them. This is a point in which prehistoric archaeology comes to the support of physiographic investigation. At present writing not a single ascertained find of the true Lower Paleolithic has been made in the Fayyum depression; bifacial tools hitherto discovered may well be attributed to a later phase. The fact that the Qatrani terraces have all yielded an Upper Paleolithic facies up to the highest escarpment edge of the depression shows that the filling of the depression by terrace and beach deposits along its outer edges did not take place until the Upper Paleolithic.

6) We are therefore left with the inference that the depression, at least in its present dimensions, did not exist for any length of time before the Upper, or at the earliest the Middle, Pleistocene. Had it existed during what is called in Egypt and North Africa the First, or Main, Pluvial period (Lower Pleistocene and Pliocene), it would have become partly filled with formations and would have yielded Lower Paleolithic tools similar to those found in the terraces of the Nile Valley itself.

7) The fact that formations along the northernmost and outer edge of the depression seem to have been derived originally from material formed under arid conditions indicates that the Second Pluvial was preceded by a phase of aridity during which material was cut and deflated by wind. It is more than plausible that the depression took its present form and dimensions during the only interpluvial phase known in Egypt, namely the one separating the First from the Second Pluvial during the Pleistocene era. This lends new support to the theory of wind erosion and helps attribute at least part of the

excavation of the depression to the Middle Pleistocene. Whether some form of depression existed before the Middle Pleistocene and was given an entirely new aspect and dimensions by wind activity during the Interpluvial remains subject to future investigation and verification. All that can be said at present is that both the outermost and highest parts of the depression, and the innermost and deepest part of the bottom, do not seem to have existed before the Interpluvial. The depression was certainly both widened and deepened during that dry phase. The work was done by wind, and perhaps also by dissolution at the bottom at a later stage. In this respect it is well to remember that both streamlet terraces of the outer northern edge and lake beaches at the bottom of the depression (at least below 35 meters) have yielded only Upper (or Middle and Upper) Paleolithic artifacts of Levalloisian derivation. If the Fayyum depression existed at all before the Middle Pleistocene (i.e., before the Interpluvial), it must have been much smaller and shallower. It is also possible that any formations and implements (especially surface material) that may have existed in it before the Interpluvial would have been broken and deflated by thermal action and wind activity during that intensely desert phase.

8) Immediately prior to the deposition of the streamlet terraces of the outer edge of the depression there occurred in certain parts of the area south and southeast of the Qatrani escarpment fractures and faults of local character; these latter are covered by the terrace formations. No long interval took place between fracturing and the deposition of the terraces, as the minor fractures of a few meters downthrow and dislocation were hardly affected by erosion and deflation before being covered and protected by the Upper Paleolithic deposits. It is therefore feasible to assume that fracturing took place at the outset of pluvial conditions, or the close of the Interpluvial at the earliest. At the same time it is clear that fracturing was in no way responsible for the formation of the depression as a whole though it may have partly facilitated its cutting along certain parts of the northern escarpment.

9) The deposition of the streamlet terraces was followed by a dry phase when salt (gypsum) incrustations were formed. The surface of the terraces was much deflated by wind action, and

the weathering implements were abraded by sand friction. It is not clear whether this dry interval was interrupted by a wet phase, although there are indirect indications of such a phase, which may have been the equivalent of the so-called Neolithic wet phase in the bottom of the depression.

10) Technological study of the flint industry proved to be of special interest; it was supplemented by the study of a large collection also found *in situ* in the 26-28 meter lake beach on the eastern side of the depression. By comparison with similar material found earlier, but not fully worked out, in the Nile Valley itself, it is now clear that in the Upper Paleolithic the Egyptian facies took a new and individual turn. What used to be called Diminutive Levalloisian or Epi-Levalloisian will probably have to assume a new appellation, although derived originally from a Levalloisian technique. The industry in Egypt tended more and more to use core-tools rather than flakes, and a new bifacial technique was started. Cores were made into axes (to be differentiated from the older hand-axes) and bifacial points, leading towards the true Neolithic ax and the triangular and hollow-based arrowheads. Another interesting technological link may be found in the edging or re-edging of working ends of core-tools and axes, a technique which started in the Egyptian Upper Paleolithic and continued, becoming much more typical in the post-Neolithic. Indeed it is quite justifiable to find in this Upper Paleolithic of the Fayyum and neighboring parts of the Nile Valley the earliest prototype of the Egyptian Neolithic stone industry. This Egyptian Upper Paleolithic may well be called "Fayyumian" in preference to Diminutive or Epi-Levalloisian, a description which was acceptable before the recent discoveries identified the core rather than the flake as the type-tool of the phase. The passage from this Fayyumian to the Neolithic or pre-Neolithic was characterized by a growing prevalence of the bifacial technique, and was accomplished without any true Mesolithic transition phase. The sequence of evolution, however, is still not quite complete, and the exact derivation of this "pre-Neolithic" phase must await further discoveries. It is not known, for example, whether in addition to elements evolving locally in northeast Africa from this Fayyumian, other

"African" elements arrived from Inter-tropical Africa and contributed to the evolution of the pre- or proto-Neolithic in the lower Nile Valley. At any rate the new work in the Fayyum points the way to a more thorough clarification of what seems to have been a complex story.

11) At the same time it is possible that this Fayyumian facies did not cover the whole of Egypt. In certain limited areas, especially in southernmost Egypt, a microlithic facies developed out of the earlier Levalloisian technique and may have represented a real Mesolithic phase. It is interesting, however, that in the Fayyum the microlithic facies comes only intrusively into the late Neolithic phase.

NORTHERN SINAI. The other phase of the prehistoric survey's activity was in northern Sinai, where a reconnaissance trip was made in the area of the middle and lower WADI EL-ARISH and its western tributaries. Traces of the late Lower, the Middle, and the Upper Paleolithic were found, but no trace of Chellean or pre-Chellean. This may have been purely accidental, but it is possible that during the Egyptian Interpluvial phase (which coincides with part of the Acheulean) weathering and deflation may have destroyed most traces of the lowermost Paleolithic except in the case of deeply embedded material which still awaits discovery. The late Acheulean and the Levalloisian of northern Sinai are associated with formations belonging to the Second Pluvial (Upper Pleistocene); these latter are mostly gravels covered by silt (partly aeolian?) especially in the lowermost valley.

An interesting site was discovered near the newly constructed RAWAFI' DAM, some fifty kilometers south of the town of Arish, where a flint mine was located. It was in use between the Upper Acheulean and the late Levalloisian, with a possibility of use also in Neolithic or later times. Physiographic levels of the different industries were fixed, and a careful study of the finds will probably reveal interesting contacts with Palestinian sites. To the west of this site but still in the center of northern Sinai a Tayacian facies was found, but unfortunately only on the surface. To the northwest at the foot of Gebel Mugharah was found a microlithic station with an industry recalling that of the Natufian of Mt. Carmel, but which may also link up with the

post-Neolithic industry of Helwan in Egypt. Perhaps Sinai was already on its way towards becoming a connecting link between southwestern Asia and northeastern Africa.

MISCELLANEOUS. In southern Sinai Professor Huzayyin was not able to carry on reconnaissance work; Dr. Henry Field collected surface material from western wadis, but unfortunately not much can be said about its dates as the typology reveals a complex mixture. It is chiefly a blade industry, which could be either Upper Paleolithic or late; some of the artifacts may be post-Neolithic or perhaps even of historic date. Together with Professor W. F. Albright, Dr. Field discovered the site of a seaport at MERKHA south of the present Abu Zeneimah, which was probably the port for the famous Serabit el-Khadim. As it lies almost four meters above sea level, it is clear that there has been no serious change in water level since Pharaonic times. This lends fresh support to the idea that the passage of the Israelites from Egypt took place at some point north of the northern end of the Gulf of Suez.

In conclusion we quote Professor Huzayyin: "In carrying out this work I was indebted to the authorities of the University of Farouk I and California (expedition). During my work in the Fayyum, A. Lutfi of the Antiquities Department, Cairo, helped me with mapping and supervision of digging. In Northern Sinai he also helped with the collection of material. Dr. Albright of Baltimore and Dr. H. Field were both with the expedition in Sinai but doing other work, the first Biblical archaeological reconnaissance work and the latter physical anthropology and measuring Bedouins. They both helped in places with the collection of surface material. Responsibility for the discovery of sites and determinations of physiographic levels, dates, etc., remains entirely mine."

M. ETIENNE DRIOTON, Director-General of the Service des Antiquités de l'Égypte, and M. J.-P. Lauer of the same organization have given us much information about their current season. It was somewhat late in starting, due to the cholera epidemic and the measures taken to control it, which prevented large concentrations of workers. Nevertheless, some excellent results have been achieved in the shortened season.

INCHASS. Last March His Majesty King Farouk sent to the director of the Service des Antiquités some black pottery vases with incised decoration of the Tell el-Yehudiyeh type, which had been found by chance by workmen who were hauling away sand at the approaches of his domain of Inchass. The inspector-in-chief of Lower Egypt, Labib Habachi Effendi, was then sent to the spot and made soundings which very soon allowed him to recognize the presence of a modest cemetery of the Hyksos period, which after a month of excavation yielded 78 tombs ranging between the Thirteenth Dynasty and the period of the Hyksos kings. These were all rectangular tombs, solidly constructed of mudbricks; they were vaulted, some of the vaults still remaining intact. The bodies were in a contracted position, surrounded by pottery vessels up to the number of 50. These were small vases, usually with handles, with a red or black slip decorated with fine incised stippling. Some lance points of bronze and five scarabs were discovered near the bodies; one scarab bears the name Ougaf, another that of the Hyksos king Erdire. Near numerous tombs were found remains of animals buried at a very shallow depth. In the cases where these are goats or bovines, their presence is explicable by the nature of the sacrificial rites; but in five cases where they are the skeletons of asses there is considerable room for speculation.

GIZA. A clearing operation undertaken at Giza by Dr. Abd-el-Mohsen Abu-Bakr in the confines of the concession abandoned by Harvard University led to the discovery of several small Fifth and Sixth Dynasty mastabas in mudbrick with elements of stone. The corridor of one was vaulted by means of closely juxtaposed bulging arcs. M. Lauer has recently published¹ a plan and description of the funerary temple of the pyramid of Cheops, which he has succeeded in restoring.

In SAKKARA, M. Lauer continued his restoration of the entrance of the enclosure of the Zoser complex (pl. VII, B). The original height of the wall was apparently around 10.50 meters, or twenty Egyptian cubits, and it is now restored to a height of 7.40 meters. Three rows of little rectangles, imitating the ends of wooden beams used for bonding in mudbrick walls, out of the

¹ *Annales du Service*, xlv, 1947, pp. 245 ff.

eight original rows on the upper part of the wall could be replaced for some distance. The lintels of the entrance passage, repaired with reinforced concrete, have been replaced, joining the north and south portions of the entrance bastion.

In the course of the excavations made to collect (for this reconstruction) the original stones of the enclosure which had been scattered and covered with sand during its exploitation as a quarry, M. Lauer came upon the tomb of Isheti, a high official of the end of the Sixth Dynasty. This small mastaba with its mudbrick superstructure is situated against the west enclosure wall of the Step-Pyramid, about 100 meters from its northwest corner and not far from the mastaba of Ptahhotep. Fragments of the false-door stela yielded various titles of Isheti, among them those of Chancellor of the King of Lower Egypt and sole friend and first after the King of Upper Egypt, as well as fragmentary cartouches of Kings Merire and Neferkare (Pepi I and Pepi II), which permit the accurate dating of the tomb. Two large limestone blocks which must have been placed at right angles to the stela show a relief of Isheti seated in front of his offering table; the style of this relief is so fine that one may well ask whether it is not an earlier piece reused here at the end of the Sixth Dynasty.

In the principal shaft of the mastaba at a depth of about four meters a little room was hollowed out of the rock on the east side in order to serve as a serdab, and still contained a whole group of statues and statuettes in painted or stuccoed wood. The two largest have an approximate height of 70 cm. excluding the bases, and bear the following inscription: "The chancellor of the King of Lower Egypt, the sole friend of the King, Isheti." Both represent the chancellor walking, holding in his right hand the "sekhem" scepter and in his left a long stick; the face of one is particularly fine and expressive (pl. viii). Two statuettes of less than half that height represent servants with very finely modeled silhouettes, the one bearing a basket on his head, and the other grinding grain in a mortar. Some little figures, among them a pretty figurine of a seated woman and an oarsman, must once have belonged to a boat. This serdab also yielded nine little cloth bags fairly well preserved and still tied with a string; eight contained barley and the ninth

wheat, in part still in the head. While clearing the shaft further, M. Lauer found three other wooden statues in the sand. One which does not have any stucco is of a particularly careful manufacture; it represents Isheti in a long robe and when seen from the back, with the bodily forms visible beneath the robe, the statue seems almost to be walking.

In the funerary chamber the robbers had carried away the sarcophagus and the mummy, but they had scorned a group of alabaster objects in a corner near the great limestone cover of the burial pit cut into the rock. The excavator thus found intact five little replicas of trussed geese and a dozen charming little collared vases of varied forms. Besides these there were a vase in translucent diorite and a beautiful First Dynasty specimen in porphyritic rock, the latter having come without doubt from one of the shafts of the Step-Pyramid enclosure, where it must already have been in secondary use. Near these vases lay also the remains of legs of beef as well as a goose. The stuccoed and painted walls of the room showed on one side the doors of appearance of the palace, and on the other granaries.

MIT-RAHINEH. The drainage works undertaken by the Irrigation Service in the palm-plantation of Mit-rahineh, the site of ancient Memphis, led to the discovery of a curious oratory (pl. ix, A) under the road between the great colossus of Ramses II and the embalming laboratory of Apis excavated several years ago by Dr. Ahmed Badawi. This oratory seems to have rested against the enclosure wall of the great temple of Ptah. It consists of a modest cella constructed of slabs of limestone ornamented with bas-reliefs, and contains three large seated statues. That of Ptah in the center has been decapitated, but those of Isis and Nephthys which flank it are approximately intact. Each goddess bears on her knees a small-scale effigy of the adult Seti I, wearing the warrior's headdress and holding in his hand the scepters of royalty. This is a realization in sculpture in the round of an iconographic type known up to now only from a relief of the same king at Abydos. The excavation and clearing of this structure, very much clogged with filth, are still in the course of execution under the care of the inspector Hachem Assaf Effendi.

DAHSHUR. The exploration of the interior of the Rhomboidal (Bent, or Humped) Pyramid of Dahshur has been pursued under the direction of Abd-el-Salam Hussein Effendi; and it is now quite certain that this monument is to be attributed to Snefru, first king of the Fourth Dynasty, and not to his predecessor Huni. It seems, however, that the structure was never used. Since the massive timber supports² did not succeed in saving the interior rooms from the constant menace of collapse, the king apparently decided to complete the exterior summarily and then abandon the structure. It is then that he must have changed the angle of elevation of the pyramid in order to adopt one which would reduce the pressure to a minimum. Benefiting by experience, he would then have adopted the same angle for the pyramid which he erected further north at the same site in the year 15 of his reign in place of the defective pyramid. One curious discovery this past season added some interest to the ungrateful work of exploring the rubble fill of the Rhomboidal Pyramid. Under the wall of the descending corridor which leads from the west face of the pyramid to the upper chamber, the excavators discovered a wooden box containing a little mummy around 30 cm. long. This proved to be only a packet of bandages artistically interlaced and covered with a dull red varnish. The interior, submitted to the examination of Professor Batrawy, contained the remains of an owl and seven bats!

During the last season Abd-el-Salam Hussein Effendi also excavated the upper temple of the pyramid of Issesi-Djedkara at Dahshur,³ and in the desert southwest of the Step-Pyramid of Sakkara he found a very large enclosure which on the basis of its masonry technique seems to be approximately contemporaneous with the latter.

EZBET-EL-WALDA. On the opposite side of the Nile at Ezbet-el-Walda north of Helwan Zaki Saad Effendi carried out his sixth campaign of excavations on behalf of His Majesty the King, and the number of tombs of the first two dynasties found here now stands at 3,500. Stone sculpture appears only at the close of the Second Dynasty and is represented solely by scenes

showing the dead seated before his table of offerings, an element which is to be incorporated later into the false-door stelae; at this period the scene occupies the center of an oblong slab, with two unsculptured margins (see pl. ix, B). Three examples found in place show clearly what was its function. It lay face downward, the sculptured side turned towards the body lying below it in the funerary chamber, obstructing the narrow, rubbish-filled shaft which connected the burial chamber with the open air through the superstructure of the mastaba or, in the case of a hypogaeum, through the ground. One may suppose that it constituted a sort of pictograph, indicating to the spirit of the dead the passage by which it could "go forth by day" towards its nourishment. A dozen of these scenes have been discovered up to the present in various tombs. The superstructures of these tombs are rarely, and poorly, preserved; but the current campaign brought to light an important fragment of the buttressed outer face containing a niche facing east, the fifth example of this orientation excavated on the site. In place of a table of offerings five pottery vessels were fixed in the ground in the embrasure of this niche.

In the **FAYYUM** a mission of the University of Geneva conducted by M. Henri Wild, assisted by M. Jacques Schwartz, made in February and March an important reconnaissance sounding in the environs of the temple of Kasr-Karoun at the west point of the lake. They discovered and explored at several points the city of Dionysias, known from the correspondence of Flavius Albinnaeus, and disengaged northwest of the city the massif of the fortress of *Castra Dionysiados*. These works will form the point of departure for future excavations.

At **KARNAK M.** Chevrier has gone far in the work necessary for the clearing of an area where he can spread out the blocks of the Second Pylon, whose wrecking and re-erection have been decided upon. In this clearance work he has completely freed the approaches of the Temple of Apet and recovered the ancient entrance to that temple: a paved road which leads from a door in the west face of the girdle wall at a slight slope towards the preserved part of the temple, with several gateways which exist up to the height

² *AJA*, li (1947), p. 421.

³ *AJA*, li (1947), p. 421.

of a man. In the embrasure of the first gateway near the bolt-hole, there is a short inscription of five columns giving the speech of this bolt and proclaiming that it is this one which wards off from the temple the enemies of the god. The operation of wrecking the Second Pylon was begun and carried as far as possible; we can hope that, thanks to the skill and industry of M. Chevrier, five campaigns will suffice to spread out on the ground all the components of this enormous structure and to re-erect them firmly on solid foundations.

KARNAK. Dr. Richard A. Parker, Director of the Epigraphic Survey of the Oriental Institute of the University of Chicago, reports that work was continued in the so-called Bubastite Gate of the Great Temple of Karnak (see pl. x, A), in the scenes of the Feast of Opet in the Temple of Khonsu at Karnak, and on the astronomical ceiling of the Ramesseum at Thebes.

ASWAN. In the mountain of Aswan in Upper Egypt the clearing of the hypogaeum of Heka-ib begun last year,⁴ was continued and is still in process of completion.

SITE NEAR WADI HALFA. Mr. O. H. Myers of the Gordon Memorial College, Khartum, reports that the Department of Archaeology excavated for three months in 1947-48 just south of the Wadi Halfa. The expedition, a very small one consisting of Mr. and Mrs. Myers and M. Vahram Manavian, aided by three trained Qufin, set out in the hope of dating certain known rock drawings in the northern province of the Sudan. It was intended to apply statistical methods recently developed by Myers for proving the contemporaneity of associated finds, in the hope that this technique might serve to date petroglyphs by the apparently associated sherds and implements. However, when only 20 km. south of Wadi Halfa, an amazingly rich series of stations was found and the whole season was devoted to excavating some of these. Between one and two meters of stratified deposits were found at the larger stations and lesser strata at the smaller. The lower levels were Nile gravels containing stone implements and pottery, and

absolute proof that the latter were contemporary with the earlier drawings was given by two fallen sections of rock face rolled among the gravels, which could be fitted into place again, one covering part of a drawing and one bearing a drawing of this type. It is thought to be almost certain that the accurate dating of the later petroglyphs will follow upon a detailed study of the implements and pottery of the higher levels, in which it will be necessary to use the statistical data collected only in the normal way between level and level.

The site contains over 40 stations dating from the Neolithic to the Christian and Islamic periods and containing some thousands of drawings, possibly unsurpassed anywhere for quantity and variety, though there is none to compare artistically with the world's finest petroglyphs. The subjects range from at present inexplicable signs in the earliest Neolithic through representations of elephant, rhinoceros, hippopotamus, antelopes, wart-hog, crocodile, scorpion, and various other animals including a shrew and a hare, to complete scenes of animals browsing and men hunting with dogs, traps, and bows and arrows. Hans Winkler's "Earliest Hunters" are shown to be Neolithic, and Mondod's cattle with *pendicules* appear, probably in the early "C-group," as was expected, but the dating of the latter has not been fully worked out.

It was found possible to fix the main high levels of the Nile in its fall of about 13 meters between Neolithic times and the present day. To extract all the wealth of information available in the area will require a larger and better equipped expedition for several seasons.

ADEN. During the winter of 1946/1947 Mr. and Mrs. Myers carried out an archaeological survey in the Colony (not the Protectorate) of Aden on behalf of the government of Aden. Surface survey showed a number of ancient sites dating from the late Chalcolithic or Early Bronze ages down to the earliest days of the occupation over a century ago. Of particular note is a very large site of the earliest period just outside the Colony on the way to Lahaj at AŞ-ŞUBR; the site is over a quarter of a mile square, and the mounds are estimated to be forty feet high. Excavation was carried out on an ancient underground water system, probably begun in Himyurite times and

⁴ *AJA*, li (1947), p. 424.

repaired in the Islamic age, and in the extensive Islamic glassworks where remains of the factories of the well known polychrome bangles and beads were cleared; some ancient wells were also investigated. A large Himyurite tomb of the first or second century B.C. was completely excavated and produced among a wealth of material some objects of Mediterranean and Egyptian origin, as well as glazed pottery which is presumably from a Mesopotamian source. Excellent hard stone beads were found, and granular gold work of high quality, such as is still made in the suq at Lahaj.

AMARAH. Professor H. W. Fairman tells us of the work of the Egypt Exploration Society, which resumed the excavation of Amarah West in November, 1947, after an interval of eight years. The work of the season was confined to the clearance of a group of storehouses and work-rooms to the south of the temple, and of an area adjacent to the West Gate where lay the governor's palace and offices. It was not possible to complete the excavation of the palace during the season. Evidence was found of four distinct levels of occupation and building. These levels are to be dated to Seti I, the early years of Ramses II, the early years of Ramses III, and perhaps Early Napatan. The site was entirely deserted between the end of the Twentieth Dynasty and the fourth level, whose date is not absolutely certain. Inscriptions found in the palace indicate a strong probability that in Ramesside times Amarah was the capital of the Province of Kush and the seat of its governor, the "Deputy (*idnw*) of Kush." In the workshops the discovery of a cache of gold-bearing quartz and of stone work-benches and tools prove that the town was the center of a gold-mining industry. Amarah appears to have been an important strategic and economic center, and this explains the constant efforts to rebuild it after repeated collapses. In the West Gate a brief text of Ramses II refers to a hitherto unrecorded Nubian campaign and the capture of over 7,000 prisoners.

PALESTINE

OLD TESTAMENT MANUSCRIPTS. The remarkable discovery of Hebrew manuscripts of the last pre-Christian centuries has been much discussed. A description of the finding, just before the out-

break of fighting in Jerusalem, has been given in *The Biblical Archaeologist*, xi, 2 and 3 (May and September, 1948), and a more scientific discussion of the manuscripts has occupied Numbers 111 and 112 of the *Bulletin of the American Schools of Oriental Research* (October and December, 1948). I have to thank Dr. John C. Trever for the following preliminary statement, and for the photograph reproduced, pl. x, b.

"After we set to work to repair the manuscripts which the Syrians brought to the School, we discovered that two of them belonged together, with the result that there were four manuscripts. The first and by far the most impressive is the Isaiah scroll with its 54 columns of beautifully preserved Hebrew writing. Dr. William H. Brownlee, another fellow of the American Schools of Oriental Research, soon identified a second scroll as that of a commentary on the Book of Habakkuk. The third scroll, which had been in two separate parts, proved to be a "Book of Discipline" of some reactionary Jewish sect whose headquarters were probably down near the Dead Sea. It is not quite clear whether this manuscript is complete, though the first column would indicate that it is the beginning. The last column is obviously the end of the writing. These three manuscripts are all clearly Biblical Hebrew. The fourth manuscript has not been unrolled because of its very bad state of preservation. The nature of its contents, therefore, cannot be determined as yet. It is hoped that it will not be too long before this manuscript can be unrolled and photographed like the others. All the manuscripts have been carefully wrapped in paper and taken to a place of safety outside of Palestine."

ARCHAEOLOGICAL ACTIVITIES. From Dr. Trever and Professor Millar Burrows, then President of the American Schools of Oriental Research, we have further information on the few archaeological activities which did take place in Palestine last year. André Parrot, who was expected to resume excavations at Ai in the summer or fall of 1947, did not arrive; but Père de Vaux of the Ecole Archéologique Française had a second season of work at TELL EL-FAR'AH in which he extended the area of excavation and found a great deal of very interesting Chalcolithic pottery. Professor Sukenik of the Hebrew University was granted permission to dig at Tr-

BERIAS, but it is not known whether this work was ever carried out. The Department of Antiquities had a campaign at KHIRBET MEJER and uncovered some very fine mosaics in the Omayyad palace.

The fate of the Palestine Museum is a cause for considerable concern. A plan had been devised for putting it under the control of an international board of trustees before the termination of the British mandate, but apparently that plan was not carried out. The Museum was at one time occupied by the Arab Legion. The building of the American School at Jerusalem has suffered considerable, but fortunately not irreparable, damage.

[The latest report from Jerusalem (March, 1949) is that the disposition of the Palestine Museum is still unsettled. The building and its contents came through the fighting unharmed. Many, if not all, of the Transjordanian antiquities were removed to Amman. The Israeli government has proposed that the present Museum be continued as a joint Arab-Jewish enterprise, and it may be hoped that a solution may be found in this direction. Editor.]

Professor Braidwood reports that Mr. Lankster Harding, Director of Antiquities for Transjordan, has been preparing a museum of Transjordanian antiquities, but doing no digging, with the possible exception of clean-up operations around AMMAN.

SYRIA AND LEBANON

PALMYRA. No news has been received directly from Syria or Lebanon, but Professor Braidwood reports that the Emir Ja'far, Director of Antiquities in Syria, has been doing further work at Palmyra.

MIDDLE PALEOLITHIC. Professor Huzayyin tells us of a new discovery by Father Fleisch of a Middle Paleolithic industry on the 15 meter shore line to the south of Beyrouth. The industry was found partly *in situ* in red earth which was presumably formed some time after the recession of the sea from the 15-20 meter level. Part of the material was exhibited by Father Fleisch at the International Anthropological Congress in Brussels, and it may be described as a somewhat late facies of Levalloisian.

TURKEY

PROFESSOR HELMUTH BOSSERT of the University of Istanbul has sent us a report of the activities of that institution in the past year.

In the fall of 1947 excavations were started at KARATEPE under Professor Bossert's direction and continued for about two months. A plan of the citadel wall was made, and two entrances built of orthostats which bear reliefs and inscriptions in Old Phoenician and in the Hittite hieroglyphic script were uncovered. The inscriptions were found to constitute a bi-lingual record, which will be most helpful in the decipherment of the Hittite hieroglyphic language. As far as the contents of the inscriptions go, it can be said already that the city was built by King Asitawandas, king of the Danuna, who gave his own name to the city. The king calls his dynasty that of Mopsos, who is known in Greek history as a Cilician hero.

During the same season explorations in the vicinity showed the existence of a monumental Hittite royal rock-relief at HEMITE, which doubtless belongs to the second millennium B.C. A short Hittite hieroglyphic inscription next to it gives the name of a Hittite king unknown up to now. A fragment of an Aramaic inscription of the Persian era was also discovered at Hemite.

In the spring of 1948, according to Professor Bossert, several sites which according to Greek tradition are associated with King Mopsos were examined, the most important of these being MOPSUKRENE (modern Güzeloluk) and MOPSUESTIA (modern Misis). Excavations at Karatepe were continued also and will be taken up on a larger scale in the fall of 1948.

Professor Braidwood reports that Dr. H. Z. Koşay was to resume his excavations at ALACA HÖYÜK, and Axel Persson was said to have gone to a Classical site near ANTALIA.

BAYRAKLI TEPE. Mr. John Cook, Director of the British School at Athens, has sent a report of joint excavations of the School with the Archaeological Institute of the University of Ankara which were carried out from June 3-July 7, 1948, at Bayrakli Tepe, three miles up the coast from Smyrna. Apart from soundings made by F. Miltner in 1930, the site has hitherto been unexplored. This season's work has been confined

to exploratory trenches with a view to testing the depth of the deposit and confirming the identification of the site with the city of Smyrna destroyed by Alyattes.

No sign of occupation between the time of Alexander the Great and the nineteenth century of our era was observed, but earlier material was found in the area south of the highest point of the mound, where a substantial building with low stone foundations was discovered. It was built in the early fourth century B.C., rebuilt soon after on very much the same plan, and abandoned not many years later; traces of walls underneath, which may go back into the fifth century have not yet been investigated. The great number of amphora fragments found suggests that the occupants of the building may have been connected with the wine trade. In the northern part of the same sector the excavators found at a depth of about ten feet a series of walls of small fitted stones still standing to their original height of three to four feet and bearing a superstructure of fused and partly collapsed mudbrick (pl. XI, A). Several nearly complete vases of about the beginning of the sixth century were found above the floor level here, and the stratum was noticeably rich in iron and bronze arrowheads.

Deep trenches were sunk near the north edge of the mound east of the highest point and in lower ground towards the south. In both areas the latest habitation level has been eroded, heavy foundations being found only a foot below the surface. Below this were superimposed walls of seventh century buildings, where in more than one instance only the interior wall faces were dressed, as though the floor level inside the buildings was lower than the ground level outside. The early Greek constructions in the lower (southern) trench include parts of three apsidal walls (pl. XI, B, C) and a circular stone-lined shaft over six feet in depth which rested on a cobbled pavement (p. XI, D). In the upper (northern) trench the early Greek habitation levels were broken into by a deep layer of boulders apparently tipped as a backing for a city wall of the early seventh century.

It has so far been possible to probe the lower levels only in a restricted area. The strata associated with Geometric painted pottery extend to about nine feet below the latest archaic surface. Several floor levels and small remains of walls

have been uncovered below this to a further depth of twelve to fifteen feet. The lower limit of occupation has not been reached at any point; in the southern trench digging went down to a depth of 2½ feet above sea level, when the water table was reached. The pottery found in the lower levels is mainly brown and pink-washed monochrome ware, and is associated with flints and other stone implements.

Investigations in the grave field on the slope to the north of Bayraklı Tepe produced three small vases of the fifth and early fourth centuries in previously looted tomb cists.

TARSUS. Professor Hetty Goldman has been kind enough to furnish us with the first report of the 1947 and 1948 excavations at the site of Gözlü Kule, ancient Tarsus.

When work was resumed at Tarsus for two months in the spring of 1947, the first efforts were devoted to clearing the site of the earth which had hastily been thrown over partially exposed walls when the first rumblings of the Second World War sent the excavators hurrying home, to return only after a lapse of more than eight years. Attention was centered upon a somewhat reduced area in trench A,⁵ where a row of well-aligned houses with party walls opened upon a street running along the inner face of a fortification wall which was provided with retreating angles. At a level about 14 meters below the datum an earlier wall with much the same alignment was already showing under the later one. This earlier wall when exposed to its base proved to be a massive structure about 1.50 meters wide, preserved at many points to a height of more than 3 meters. It had been thrown diagonally across a second row of houses originally forming the southern side of the street (pl. XII, A). Everything pointed to haste and panic. Just below the wall were the signs of a devastating fire which had swept both sides of the street (pl. XII, B) and one may suppose most, if not all, of the town. That it was due to hostile action cannot be doubted in view of the measures immediately taken for protection, but nothing in the remains points to capture of the town by an enemy of a radically different race and culture. Such houses as were

⁵ *AJA*, xlv (1940), pp. 60 ff.

re-used after the fire were rebuilt along exactly the same lines, and contained several superimposed examples of the same kind of hearth and small seat as was illustrated in an earlier report (pl. XII, D).⁶ This manner of furnishing the houses came into use at the beginning of the Early Bronze Age and at a depth of about 18.50 meters. In ceramics, too, many of the shapes of the later Early Bronze Age were already in use; and the incised pottery, although now found for the first time except for sporadic instances, is not at variance with what one would expect in an Anatolian town of the third millennium B.C. which was accessible to Cyprus.

The early fortification wall was built by condemning the houses on the whole southern side of the street. Destroying nothing in their haste which could possibly be left *in situ*, the defenders built sections of the fortification wall between the party walls of the condemned houses; and to make the construction more solid earth with a good admixture of clay and scattered brick was piled up in the now deserted and partially obstructed chambers to a point which roughly followed the contour of the southern walls of the houses. Although evidence for a true face of brick was never found, doubtless destroyed by the terracing operations of the Middle Bronze period, very heavy masses of brick, such as may be expected against the inner face of a wall, were still extant; and this whole southern area evidently formed a huge defensive parapet. It was further strengthened by stepped terraces as the wall approached the southeastern angle of the settlement.

The incised pottery of which some examples have already been published⁷ was fairly abundant and could be divided into three broad classes:

- a) Handleless jars of terracotta red with low burnish, ornamented in bands of very fine shallow incisions, resembling cross-stitching (pl. XIII, B).
- b) Highly burnished red slipped wares with careless incisions in dashes and broken lines covering diagonal areas of the surface. The shapes were usually narrow-necked jugs (pl. XIII, F) or side-spouted vessels, although there were other varieties.
- c) Bowls and cups with coarser incision in both light and dark clays. On the better examples the patterns were well organized and sometimes quite elaborate (p. XIII, D).

Going with the incised pottery were occasional multiple pots and many small, light clay bowls, wheelmade and with a scraped exterior. Of the same type of clay, but much finer, was a small grooved cup with vertical, slightly flaring sides.

The houses were carefully built with both external and internal pilasters and windows, as well as doors (p. XII, F). The hearth-seat mentioned above was of unburned brick and could hardly have supported any great weight, but it was very carefully made and may well have been connected with some religious ritual of the hearth. There were other indications of ritual use which cannot be enumerated here; one recalls that among the Hittites of Central Anatolia a chair or bench plays a role in ancestor-worship. Niches in the walls (pl. XII, E) served as cupboards, and clay bins and containers of great variety were ranged along the walls. Much wood was used for posts, rafters, and doorills; and there was some evidence for raised wooden platforms, such as are still in use at Tarsus for sleeping where the ground is damp.

Some of the buildings were clearly workshops and storerooms or warehouses, equipped with shelves of wood and low, broad, clay platforms or benches on which objects could be set; these structures never had the purely domestic feature of elaborate hearth and seat. An interesting room of the non-domestic class which antedates the wall was at two levels, connected by a stairway (pl. XII, C); against the side of the stair leaned an enormous pithos into which a great deal of well preserved pottery had been thrown. In other storerooms the charred remains of grain-stalks, figs, and grapes lay among masses of shattered jars. At about 18.50 meters the whole complex of street and houses came to an end and, according to the investigations of 1948, rested on a prepared surface of several layers of clay which served to level off the ground. This Early Bronze town had none of the haphazard and chaotic appearance characteristic of an Oriental village which has grown by accretion, but was carefully laid out. The picture is that of unified planning probably under the general direction of the local overlord whose house might well be found could

⁶ *AJA*, xlv (1940), p. 70, fig. 17.

⁷ *AJA*, li (1947), pl. xc.

one reach the end of the street which runs at right angles to the wall and now lies securely buried under many meters of earth. The people themselves showed craftsmanship of no mean order and were able to work well and durably with the materials at their disposal: wood, clay, and stone. If these are the Luvians who are said to have inhabited Cilicia at this time, they show just those characteristics of a stable, indigenous peasantry which one would expect.

There were the usual finds of stone implements and a number of stamp seals in clay (pl. XIII, A), stone (pl. XIV, B), bone, and bronze (pl. XIV, A). Considerable use was made of veined marble or limestone skillfully worked to an even thinness, as in the case of a curved scoop. The use of marble, especially for bowls, bracelets, and small spools or pestles (pl. XIV, C), was one of the features which linked the cultural pattern of third millennium Tarsus with that of contemporary Crete and Greece. Another link may be found in the shape of a flat alabaster idol (pl. XIII, C).

The account of the excavations carried on in May and June of 1948 is based upon the report on architecture of Miss Theresa Goell and that of Miss Machteld Mellink on ceramics. Together with Dr. Ahmet Dönmez, the able and helpful Turkish inspector, and Miss Arlette Cenani of Istanbul, and with Miss Goell in general charge of the field work, they carried the excavation to a successful conclusion. The ground selected as the start of a north-to-south stepped trench which was chiefly designed to establish the early ceramic chronology, included the southern areas of some of the rooms cleared in 1947 which lay partially under the fortification wall, together with an area to the south previously undug. As it turned out, there was no need to create arbitrary steps; for by following the building levels and the contours created by ancient terracing operations, the steps simply formed themselves. When work ceased, the trench from north to south had an overall length of 21 meters, and varied in width from 8.55 meters to 4.60 meters. The final investigations were carried on in a trial pit at the southern end. When the excavation closed, a stratified sequence had been secured which started with the very beginnings of the Early Bronze, went through a rather deep deposit of transitional material followed by thinner

deposits of Chalcolithic, and reached Neolithic, which could not, however, be fully explored because of the infiltration of water at 31.80 meters below the datum. At this level the pit still yielded abundant Neolithic potsherds and obsidian implements, and revealed a stone wall. The deposits of the Chalcolithic period showed little depth, doubtless due to the fact that the pit was dug at the edge of the settlement.

The ceramic evidence may be summarized as follows: Middle Bronze material was found only as an admixture on the southern edge of the excavated area where terracing confused the stratification. The transitional period between Chalcolithic and Early Bronze fell between 19 and 27 meters and permitted subdivision into two phases: a) Between 19 and 23 meters the light clay bowls of Early Bronze were no longer found, but a variety of gritty red ware, still represented in the Early Bronze Period, was dominant. The chief shape was a jug with depressed base and rising spout, sometimes carelessly painted with white or white-and-red stripes on neck and handle. In addition, there were large stump-based pithoi with leaf impression. About one-third of the ceramic material consisted of thin jars and bowls of chaff-tempered, light slipped fabric; and there were as well heavier and larger pots of similar fabric. Polished and incised bowls, both black and red, were still found, and there were striking black polished bowls with white-filled incisions. Forerunners of the ubiquitous light clay bowl of the Early Bronze Age were thin-walled wheelmade bowls with smooth outer surface and intentional ring markings on the interior. b) At the earlier phase of the transitional period, 23 to 27 meters, the pottery was fairly equally divided between the gritty red wares and the chaff-tempered wares. The former now included, in addition to the shape already mentioned, a thin burnished cup with steep walls and red-white paint in vertical stripes along the rim. In general, more of the red gritty ware was painted than at the higher levels. The chaff-tempered, light slipped group appeared still to be unpainted. Black and red polished wares represented only about three per cent of the sherds, and incised black polished pottery was correspondingly rare, but included a new type of steep-walled cup.

There were three phases of the Chalcolithic

Period, which was represented by a deposit 3½ meters in depth. a) The late phase extended from 27 to 29 meters. Black and red polished sherds were rare, and the chaff-tempered wares amounted to almost one hundred per cent of the bulk. Light slipped jars and bowls, both thin- and thick-walled, were the prevailing shapes, and the fabric was in great part orange colored. The finer wares had carinated profiles. There are some jars and pitchers with vertical red stripes (pl. xiv, d), but paint is on the whole rarely used. Only coarser vessels now are made of the gritty clay. To this phase belong the early graves found in 1937 when the field was tested before establishing a dump.³ b) The middle phase, 29-30 meters, is characterized by the occurrence of slipped wares, chiefly carinated bowls and jars of varying sizes with designs of chevrons in both vertical and horizontal patterns (pl. xiv, g). As only two black-polished sherds turned up among literally hundreds, this technique belongs very definitely to the later periods. c) Only fifty centimeters in depth represented the early phase of the Chalcolithic, but the pottery was distinctive and may be characterized as of Ubaid type. Predominant are plain bowls without carination. If painted, they have swags and rim bands of red or dark color (pl. xiv, e); the thinner type has a thin edge and painted rim. The jars have shoulder decoration of wavy lines between horizontal bands, and some have thickened rims. Below 30.50 meters chaff-tempered wares rapidly vanish, and dark-faced burnished wares with hole-mouth profiles predominate (pl. xiv, f). In general this pottery is well known from the far more voluminous Neolithic material of Mersin. It is worth noting that some red slipped and burnished fragments were still found at this early level, but the profiles could not be determined.

During the transitional period the change in cultural pattern was as apparent in the architecture as in the pottery. The period was characterized by the use of rubble and field stone foundations under walls of tamped clay, although the manufacture of clay bricks was already practiced. The skill in making building accessories was equal to that of the Early Bronze period, as even the limited area of the excavation

clearly showed. The section directly to the south of the Early Bronze houses and at a level of about 20 meters was evidently used for the storage of cereals to judge by the scattered circular pits containing carbonized grain. Still further to the south where the ground fell away a cobblestone pavement came to light at 21 meters; it sloped sharply toward the north and was the first of a series of pavements and floors of streets or courts. At one level two tiers of foundation stones stretched from north to south on both the eastern and western sides of the trench, obviously forming the boundaries of a street which appeared to have led to the heart of the settlement. Whether at any point it passed through an earlier fortification, such as was found at Mersin, it is not possible to say; however, in support of such a theory one may note that at about 24 meters first stone and then traces of a heavy gate foundation were found which indicated a monumental entrance. On the west side of the trench appeared a bewildering succession of benches, hearths, bins, altars (?), pits and canals (pl. xii, g); and at 21 meters a flat handmade clay idol with plastic detail (pl. xiii, e) was found on top of a hooded hearth. While the idol itself does not constitute evidence of any weight, the aspect of the whole precinct suggested to the excavators the possibility of use in religious ritual. The constant rebuilding and renewal made the problem a very complicated one, which awaits further study. At a still lower level (23 meters) the street was paved with fine gravel. When the excavation finally was limited to a pit at the southern end, an area of private houses was again struck, which greatly increased the amount of interesting ceramic material. When the dig was finally stopped by the infiltration of great quantities of water, there was no evidence that virgin soil was in sight; on the contrary, there were still substantial foundations of stone and clay.

IRAQ

THE IRAQ PROJECT of the Oriental Institute's Syrian Expedition had a short season in the spring of 1948, working in two early prehistoric sites. The staff included Professor Robert J. Braidwood, Linda S. Braidwood, Dr. Faraj Basmachi, and Charlotte M. Otten.

³ *AJA*, xlii (1938), p. 43, fig. 32.

MATARRAH. The expedition worked 38 days on the site of Matarrah, 34 km. south of Kirkuk on the main Baghdad road. The 8 m. high mound some 200 m. in diameter, is only half artificial, having been built originally on a low hill. A light Ubaid period deposit was first encountered, then an all-over occupation of Hassunan materials⁹ with Samarran painted pottery in the upper levels. The assemblage was somewhat different from that of Hassuna itself; characteristic motifs of the Hassunan painted pottery were not evidenced, nor were the better types of Hassunan flint work, including the hoes, present. There was a greater emphasis on the plain incised ware than at Hassuna, and the profiles of the large coarse wares of Hassuna, especially the "milk jars" and "husking trays" occurred at Matarrah. No metal was found. The human physical material is probably not in a condition to be useful for osteological study. Grain and animal bones were found and await further study.

The houses were *touf*-(plain mud) walled structures of at least four rectangular rooms, rather well done. Below the deepest layer of built architecture in one 5×10 m. exposure there was a peculiar arrangement of pits dug into virgin soil (pl. xv, A). Besides round (and in one case undercut) storage pits and a variety of holes or channels of various sizes, there were three single and one complex larger pits (3½ m. long) with a peculiar plan resembling a thermos-bottle lying on its side. The battered sides of the last-mentioned had been purposely and uniformly burned, a feature also occurring in many of the smaller pits. After considerable speculation, the most likely theory as to the original use of these peculiar structures is that of small temporary pit-dwellings with mat roofs; regular stick- or post-holes for the support of such roofs did not, however, occur.

QALAT JARMO. The expedition also worked 30 days on Qalat Jarmo, a village site on a promontory in the hills beyond Chemchemal (midway between Kirkuk and Suleimanieh) in southern Kurdistan. The land slopes gently down from the height of the mountain range in the region of the pass of Darbend, forming a terrace which is

deeply cut by wadis. Here in the spring grow numerous flowers and grasses, including some apparently wild grains. The time at hand and the size of the digging crew was small in the Qalat Jarmo operation; moreover, the fill was remarkably hard and made for slow digging. The materials obtained, however, are extremely interesting and give promise of yielding important results when they can be studied at leisure.

The mound is about 90×140 m. in size and relatively low. A 7×10 m. side-cut opened at one edge of the mound yielded some 5 m. of occupational debris, and several small, shallow test-pits were made elsewhere. In the upper 75 cm. of deposit (which was, in effect, the humus line) appeared small worn fragments of handmade pottery, about 75 per cent coarse ware and the remainder red burnished ware. These have no counterparts, to the excavators' knowledge. Such small objects and flints as appeared in association with the pottery were in no way inconsistent with those in the well demarcated levels below, but pottery did not occur below the upper 75 cm. Hence we have here a well stratified site with a depth of at least 4 m. which belongs to a time before the making of pottery vessels was known.

There were eight layers in the side-cut above bedrock, and possibly subdivisions of two of these (pl. xv, B). Until the sixth level was reached, such architecture as was encountered consisted of small fragmentary short courses of *touf* walling, some courses of stone, two large roundish undercut silo pits, an elliptical structure in asphalt, and an almost complete clay basin with low sides baked in place on the floor. The sixth level yielded a rectangular-roomed building which was not cleared completely since it was necessary to reduce the size of the operation at this point. There were at least four rooms, some provided with doorways. The *touf* walls were neither very straight nor uniform in thickness, nor were some of the corners too close to a right angle; but there was no doubt whatever that the builders intended a complex of rectangular and connected rooms in one structure. A portion of the floor of one room and all of the floor of another small room had been laid with reeds; odd fragments of reed mats and one of basketry also appeared. One room, or perhaps court, had a complex of flagstones and a quern in place, and there was a boulder mortar in

⁹ See Lloyd and Safar, *JNES*, iv (1945), pp. 255-280.

another room. No rooms were found in the portions of the seventh and eighth levels which it was possible to clear.

With pottery vessels, spindle whorls, and of course metals, all lacking, the assemblage is quite simple, with no appreciable difference in depth. There are clay and a few stone figurines of animals, and in clay several human faces, fragments of seated steatopygous "mother goddesses," and one squatting female with arms and legs curled tight around the body. Apparently only about a third of the clay figurine group had been fired. There were also many bulla-like lumps of clay with straw- or reed-impressions, and a number of small clay cones. Ground stone objects included querns, rubbing-stones, boulder mortars, pestles and carefully worked small pestle-like stones, numerous large round hammerstones, some quite large pierced round stones (digging-stick weights?), celts, a phallus-like object, and beads (including an interesting type of flattened ellipsoid with collared ends). Particularly interesting were the fragmentary remains of an apparently well developed industry in stone vessels; the stone was apparently chosen with some care as to the desired color effect.

It was not possible to do more than wash, mark, and sack the flints in the field. The normalized implements were abundant and included the sickle-blades, borers, burins, and plain blades usual in early village horizons. There was also a marked occurrence of microliths, consisting mainly of neat blades, borers, and an occasional triangle. The bone work consisted mainly of awls and rib blades, but there was also a well made long-handled spoon with a shallow bowl. One simple shell pendant appeared.

There were both adolescent and adult burials, flexed, but without consistent orientation; it is doubtful if the physical material is in sufficiently good condition to be useful. Animal bones occurred in numbers and await study, along with about two dozen kernels of grain and some mineral specimens.

IRAQ PROJECT RESULTS. Lacking detailed study on the materials from both sites, the following impressions were formed in the field:

1) The Matarrah material seems to indicate a rather impoverished southern variant of the general Hassunan range. Some rather elaborate,

fine-lined patterning on the incised pottery, a kind of stone stud, and the strange complex of pits in virgin soil are the only new material yielded. However, this new occurrence of Hassunan, which is otherwise known only from the type-site, is of itself interesting.

2) The Qalat Jarmo material is of a stage almost completely unknown in the Near East—that lying between the end of the food-gathering, "cave-dwelling" stage and the fully formed village assemblages. The excavators had several years ago postulated the existence of such a stage filling a gap in archaeological knowledge.¹⁰ What has been hitherto known of this stage consists of a variety of surface materials labeled "Neolithic" and the incompletely published finds from a restricted area at the base of Jericho (Jericho levels 17-10)). The Qalat Jarmo material now gives substance to the interpretation of the basal Jericho material, and certainly helps to fill in the gap between cave- and village-dwellers. It is anticipated that one of the exciting features of the study of the Jarmo materials may be that on the grain and animal bones, since it seems doubtful that there is any other sampling of grain and fauna at a point so close to that in which food-production must have begun.

3) An admittedly subjective point arose from the simultaneous handling of the materials from the two sites. This is that, while the technological and artistic handling of the Hassunan materials of Matarrah seems generally static, there is a great feeling of vitality and creativeness in the case of the material of Jarmo. And so it should be, if the Jarmo finds really come within that great burst of cultural energy which must have attended the beginning of the new food-producing economy.

ERIDU. A report on the recent excavations at ABU SHAHRAIN (ancient Eridu) by His Excellency Naji al-Asil, Director General of Antiquities of Iraq, has already appeared in the *London Times* (May 11, 1948). At the close of the Directorate-General's second season of excavating at Tell Abu Shahrain two primary results can be recorded. In the first place, the

¹⁰ L. and R. Braidwood, Papers nos. 16 and 18 in *Human Origins, an Introductory General Course in Anthropology, Special Readings*, vol. ii.

finds have gone a long way towards confirming Eridu's claim to be the most ancient city of the Sumerian world. Secondly, they have effectively refuted one of the most universally accepted assumptions regarding the prehistory of Iraq—namely, that the earliest settlers in the drying delta of the Rafidhain were the people associated with the name of Al 'Ubaid, the village settlement where traces of them were first found in 1924.

Excavations were reopened in mid-November, 1947, under the direction of Sayyid Fuad Safar, who was assisted by Dr. Mahmud Al Amin, Sayyid Akram Shukri, Sayyid Izz-ad-Din Sanduq, and others; they continued until the end of February, 1948. It will be remembered that already during the previous season the discovery beneath the ziggurat of a temple of the Al 'Ubaid period, well designed and skillfully built in sun-dried brick, had gone far to change the popular conception of the Al 'Ubaid people as primitive marsh-dwellers. In addition to the excavation of earlier buildings beneath this temple, the excavators now assigned themselves the secondary task of examining the area to the southwest, where the old prehistoric settlement extended beyond the limits of the main mound; and here almost at once the new conception of an advanced Al 'Ubaid culture was once more most drastically confirmed by the discovery of a cemetery contemporary with the temples found in the previous season.

In the 200 or more tombs so far excavated the dead lie at full length with their feet pointing southeastward, surrounded by their beautiful painted pottery and small possessions. The tombs themselves are built of *liben* (sun-dried bricks) in the clean sand upon which the settlement was first founded, and are in many cases large enough to contain a man with his wife and sometimes a child, the graves having been reopened to accommodate a second, and sometimes a third, body. In one case, laid directly upon the grave of a fifteen year old boy, was the perfectly preserved skeleton of a dog (perhaps his pet Saluki), while in others some idea of the clothes in which the dead were buried could be obtained from the bead-fringe of a dress, an ornamental waistband, or other features. One woman's grave contained, for the first time in the history of excavating, the male version of the famous "lizard"

goddesses discovered by Woolley at Ur, and another contained perhaps the earliest clay model of a sailing-boat.

Meanwhile the temple excavation had continued to reveal one sacred building after another, each one older than the last and each showing some new characteristic of primitive architecture or indication of a religious cult. The greatest surprise of all was in store at the sixteenth level, nearly ten meters beneath the surface, when the familiar pottery of the Al 'Ubaid civilization suddenly disappeared and was replaced by an entirely new class of elaborately painted vessels, having some features comparable to the earliest pottery found in the north of Iraq. Here also a few feet above the surface of the sandhill upon which the earliest settlement was founded, were the *liben* walls of a minute temple—the forerunner of the fifteen temples above and the earliest building of its sort yet known to archaeologists.

Here then were both the pottery and the architecture of a new culture—the culture of the settlers in south Iraq previous to the Al 'Ubaid people. And since no traces of this culture were revealed by the deep soundings made at Ur or any other Sumerian site, Eridu's claim to be the oldest city must for the time being take precedence.

MAKHMUR REGION. Professor Braidwood reports that Professor M. E. L. Mallowan, Director of the British School of Archaeology in Iraq, in cooperation with the Iraq Directorate of Antiquities last year made soundings on several mounds in the Makhmur region north of Kirkuk and northwest of Altun Köprü.

RELIEF FRAGMENTS. Father Roger T. O'Callaghan, S. J. tells us that another fragment of an Assyrian relief has come to light in Florence. A further piece, known at first only from a photograph among the papers left by Professor Teloni in Rome, has been discovered in the Archbishop's residence in Florence. Both objects will be published in *Orientalia*. Among the same papers were also found the photographs of some reliefs which belonged to the private collection of the famous excavator Austen Henry Layard; these reliefs are in Venice and, with the exception of one, have been placed at the disposal of *Orien-*

talia for publication. Almost at the same time Layard's private collection of cylinder seals was found by Dr. E. Borowski; some very choice and beautiful objects are concerned, and it is expected that they will soon appear in *Orientalia*.

IRAN

SUSA. In the winter of 1946/1947 the expedition of the Mission Archéologique Française en Iran at Susa, under the Direction of Dr. R. Ghirshman, worked in two areas. The first, opened in the tell of the Apadana, had as its goal the clearing of the hypostyle hall of the palace. In spite of the depredations sustained by this monument, which has suffered much more than the Apadana of Persepolis, the expedition was able to recover the remains of walls in baked brick, mudbrick, and pisé (stamped earth), and to establish the exact plan.

The second area was established on the mound known as the "Ville Royale." There the expedition proposes in the course of a series of campaigns to investigate all the superimposed cities forming an artificial elevation of over 20 meters of accumulation. The latest city, that on the surface, of the Islamic epoch, was cleared over an area of over 10,000 square meters. Three building periods could be attributed to the first four centuries of the Hegira. The expedition cleared three parts of the city with streets, shops, private houses, and sanctuaries. Abundant pottery and glassware permitted a fairly detailed classification of the products of the Islamic artisan. A certain number of early Arab coins, some unpublished, and a mural decoration in sculptured stucco, were also found in this work.

The campaign of the winter of 1947/1948 at Susa was very fruitful. The expedition cleared a very old mosque dating shortly after the Arab Conquest on the mound called "Ville des Artisans," and on the same mound was discovered a cemetery of the Parthian period, which allows some very important observations as to burial customs in this period. Here too a large amount of Islamic pottery and glassware was collected, giving further interesting indications of the development of these industries in the first centuries after the Hegira. Finally, there were brought to light two little treasures, one containing 50 decadrachmas of Alexander the Great and some drachmas of the Seleucid kings, and

the other comprising nearly 1,000 drachmas of the Abbassid caliphs in the ninth century of our era.

In 1947 there was found at Susa a very important monument of the Parthian period. It is a bas-relief representing the King of Kings Artaban V giving a ring (symbol of power) to the satrap of Susa. An inscription in Arsacid Pahlavi gives the date of the event, which is the year 536 of the Seleucid era, corresponding to the year 225 A.D. The monument then comes from the last year of the Arsacid dynasty, and its inscription allows us to throw a little light on the period when Artashir Babakan, founder of the Sassanid dynasty, was in revolt against his sovereign.

At the beginning of April, 1948, the expedition moved to MASJID-I-SULAIMAN, where it cleared the construction which it is thought may be identified as a fire-temple. The terrace was carefully cleared, and investigations made in the neighboring sites, particularly the site of La-li, where in the autumn of 1947 were found by chance some implements in pure copper bearing Sumerian inscriptions with a dedication to the god En-lil.

INSCRIPTIONS. Mr. Richard N. Frye of Harvard University has just returned from a trip to the province of Fars. He explored the Sasanian site of Sar Mashhad, south of Kazerun, and made a copy of the inscription over the bas-relief of Bahram II. This inscription, discovered by Herzfeld in 1924, has never been published. Mr. Frye has determined that it was carved by Kartir, the *mohadân-mohad* of Shapur I and his successors. The first part of the inscription is a copy of the inscription of Kartir at the Ka'abah of Zardusht at Naqsh-i-Rustam, and the end is the same as Kartir's inscription at Naqsh-i-Rajab; it is the largest Pahlavi inscription in Iran, but is unfortunately in a bad state of preservation. Mr. Frye also obtained squeezes of the Pahlavi inscriptions of the entire Ka'abah of Zardusht, of Naqsh-i-Rajab, Hajjiabad, and a pillar at Persepolis, and an inscription in Aramaic script to the right of Darius' tomb at Naqsh-i-Rustam. All scholars are invited by Mr. Frye to utilize these squeezes and photographs.

Further information from Mr. Frye includes the statement that graffiti in Hebrew characters have been discovered on a window sill of the

harem at Persepolis. He tells us also that Zakat 'Ali of the Ethnographical Museum in Teheran is now at Persepolis, where he will remain for two years preparing a gypsum model one hundred times reduced of the present state of the site, including Naqsh-i-Rustam and Naqsh-i-Rajab.

Since several Greek and several Pahlavi characters of the bilingual inscription to the right of the horse of Artashir Babakan on the rock relief at Naqsh-i-Rajab have recently been chipped away by vandals, the Museum of Antiquities is trying to secure photographs and squeezes of all existing Pahlavi inscriptions.

THE IRANIAN PROJECT of the Oriental Institute of the University of Chicago explored in Khuzistan, Iran, from January through early April, 1948. The expedition consisted of Dr. and Mrs. Donald E. McCown, Mr. Kamby, able representative of the Iranian Antiquities Service, Mr. Carapetian, skilled chauffeur and mechanic, and Mr. Sako, draughtsman. The expedition's aim was to explore the hitherto archaeologically unsurveyed area south of Ahwaz, and to locate a promising pre-Achaemenian site at which excavations might contribute evidence of Iranian relationships with Lower Mesopotamia.

The exploratory program fell into three phases. First the flat and low-lying area extending from the head of the Persian Gulf up to Ahwaz was searched for ancient sites, but none earlier than the Parthian period was located, the foundation of cities apparently coinciding with the development of an irrigation system. The absence of settlements of earlier periods may be due to the fact that the alluvium was still in the process of formation by deposition from the numerous rivers which run through the area; it is also possible that social and economic factors may have prevented the development of an irrigation system in early times.

The second exploratory phase lay in the RAM HORMUZ valley east and somewhat south of Ahwaz and just below the foothills which extend west from the massive scarps of the Iranian plateau. In this well irrigated valley were discovered numerous sites of all periods beginning with that of the Buff-ware Culture. This valley, the next fertile region southwest of the Susa plain, must always have been of considerable

importance; for through it must have passed the road from Susa and Mesopotamia which continued south through Behbahan to Fars, but which also bifurcates to the northeast to pass through Izzeh (formerly Malamir) to Isfahan.

The final phase of exploration was done from a base at AGHA JARI, one of the oil fields of the Anglo-Iranian Oil Company, whose officials were hospitable and most helpful to the expedition. In the Zaidun River valley to the south were numerous sites dating from the period of the Buff-ware Culture onward. The same results were found around Behbahan, where Sir Aurel Stein had previously located Buff-ware sites, but not those of the Elamite period. The most southerly site found was near Bandar Dilam and a few miles inland from the Persian Gulf, where potsherds of the Buff-ware Culture and the Uruk period were collected.

The most promising site discovered was TALL-I-GHAZIR, not far northwest of Ram Hormuz. It is a complex of five mounds, three of which were sounded during seventeen days of excavation. In this brief time little more could be done than to give approximate dates to the upper levels of the mounds. In the largest one, about fifteen meters high and 200 long, there was a thin Islamic stratum, below which were found Elamite remains of the second millennium B.C. surrounded by substantial fortification walls. Under this level is a proto-Elamite layer, distinguished by a fragmentary proto-Elamite tablet, a stone animal figurine, and various pottery types, many of which have not yet been published from Susa. The soundings did not penetrate to a greater depth, but surface sherds indicate that the lower ten meters of deposit contain remains of all of the prehistoric periods of the region. A second mound, rectangular in plan, contained rubbish and graves of the first half of the first millennium B.C. below a late Islamic enclosure. The top levels of the third mound probably date from around the middle of the second millennium B.C.

The Iranian Project will continue its excavations at Tall-i-Ghazir during the coming winter season.

AFGHANISTAN

BACTRA. In 1947 the Délégation Archéologique Française en Afghanistan, under the direction of D. Schlumberger, was engaged mainly in a

preliminary exploration of the ruins of Balkh (Bactra).¹¹ There were two seasons of work, one from early April to late June, and the other from late October to mid-December. A short report on the spring campaign is being printed in *Syria*, and the material collected during the fall campaign is being studied.

The whole area of the huge site of Balkh appears to be covered with thick Islamic deposits; in most quarters these deposits extend as deep as the excavators could make their pits—that is, in some places to virgin soil and elsewhere to strata at present lying under water level. In a few places, however, especially on Tepe Zargaran (Mound of the Goldsmiths) in the eastern part of the site, the deepest layers seem to be pre-Islamic; but the finds made there were so poor and so atypical that some doubt still remains.

With the exception of some stone fragments of Greco-Buddhist architecture, such as re-used Attic bases of columns or pilasters, no remains of monumental building have been met. Pottery is mostly rather rough, and the almost total lack of comparable material makes even Islamic sherds difficult to date. Some small inscribed sherds have been found. One is in Kharoshthi; another, which is in Sogdian, has been dated eighth to tenth centuries by Mr. E. Benveniste. The only certainly pre-Islamic finds are a few rough terracotta figurines, seemingly Buddhist, and one Greek sherd showing the bust of a young man wearing a diadem, recalling some of the princes on the Bactrian coins and likely to be a stray find. To sum up, while there can be no doubt that the site contains the remains of Islamic and Buddhist Balkh (evidence for the latter being the existence of the large stupas around the city), the work done up to now has failed to produce any evidence as to the location of the Greek Bactra on that spot.

TEPE NIMLIK. Some additional work was done about 20 miles west of Balkh at Tepe Nimlik, a large mound about 40 feet high where a sherd bearing some Greek letters had been found in 1946.¹² The pits sunk into that mound reached

virgin soil everywhere. The finds, which were poor, seemed to include no prehistoric material.

MIR ZAKAH. In June, 1947, a very large hoard of Indian and Indo-Greek coins was found at Mir Zakah, some 20 miles northeast of Gardez (Southern province). A part of the hoard was secured for the Kabul Museum; it amounts to some 9,600 coins, mostly silver with some copper. The bulk of the hoard consists of Indian stamped ingots considered to date back to the fourth and third centuries B.C., notably of the so-called "punch-marked" class (about 3,850 pieces), and Indo-Greek coins dating back to the second and first centuries B.C., notably of the Greek kings (2,110 coins) and the Saka kings (2,950 coins) of southern Afghanistan and northwestern India. The latest coins of the hoard are of the Kushana King Vasudeva (first half of the third century of our era). The Délégation Archéologique is at present busy studying the finds, an inventory of which will, it is hoped, be published soon.

CAUCASUS AND CENTRAL ASIA

KAMIR-BLUR. From Dr. Henry Field we learn that B. B. Piotrovskii continued his excavation of the Urartu fortress at Kamir-Blur near Yerevan. The alignment of the fortification walls of the citadel was determined, and the south and west facades of the courtyard and the adjacent living quarters were cleared. A study of the fortifications makes it possible to determine that the destruction of the fortress was the result of the Scythian invasion. New material pertinent to the study of agriculture in the region was also discovered.

S. P. Tolstov continued his work at Khwarazm (Choresm). Near DZHANBAS-KALA a Neolithic settlement was located in which the main dwelling (22 meters long and 10 meters high) was constructed of wood and reeds. It was divided into a family section and one for the bachelors and boys; in the center, as at Kelte-Minar, was the place for the sacred fire. Nearby a site attributed to the second millennium B.C. yielded crude stone implements associated with black or yellow painted pottery.

At TOPRAK-KALA a high tower (24 meters) with several stories contained the first wall

¹¹ See now, A. Foucher, "La vieille route de l'Inde de Bactres à Taxila," in *Mémoires de la Délégation Archéologique Française en Afghanistan*, I (Paris, 1942-1948).

¹² *AJA*, li (1947), p. 201 and pl. xli, b.

paintings known in this area; the red, black, and green designs on a white background belong to the first century of our era. Monuments of the fourth or fifth century of our era, especially those of Kurgench and Barak-Tepe, were visited.

AN AERIAL RECONNAISSANCE SURVEY was begun with headquarters near the ruins of Dev-Kesken, the late medieval city of Vazir. From this base several air-routes were selected. One went along the southern Chink Ust-Yurt, bordering Erburun and cutting deeply into the plateau from the south, and recorded several ruins of post-medieval fortifications and burial grounds; thence it went further south to the headland of Dekch, then west around the heights of Butentau, returning to the base across the ruins of Ak-Kala (on many maps Akcha-Kala), Shirvan-Kala, and Shemakha-Kala. At the end of this flight the wide kurgan complex of Shash-Tepe, the first known in Khwarazm, was discovered at the headland of the Ust-Yurt near Shirvan-Kala. A second flight went deep into the plateau west of Dev-Kesken across the borders of Shorzhda and along the northern edge of the hollow of Assake-Kaudan, where some small stone fortifications contemporaneous with the late medieval layer of Vazir (fifteenth to seventeenth centuries) were discovered. From there it ran southwest to the border of Dekch, with a visual exploration of the northern edges of Sarykamysh, and thence to Ak-Kala, where a landing was made for ground investigations.

A flight was made to the ruins of Dev-Kala, Yarta-Gumbez, Orta-Keuy, Kugunek, Talay-Khan-Ata, Kurtysh, Bal-Kuey, Ak-Yail and back along the Uzboy to the region of the Charyshli well, thence further across the Sarykamysh hollow to Lake Sarykamysh and back to the base. A final flight was made in the region of the "land of ancient irrigation" to the ancient Chemen-Yab canal by way of Kanga-Kyr and Giaur-Kyr. This flight over the upper central Uzboy with landings in the region of the most important monuments made it possible to answer negatively once and for all the question of the "historic Uzboy River." On the banks of the Uzboy on the whole stretch from Sarykamysh to Ak-Yail there is not the slightest trace of irrigation or settlements. The majority of ruins are late or almost contemporary Turkoman cemeteries.

Only three monuments date as far back as the early Middle Ages: a) the Yarta-Gumbez mausoleum, a building of the type of the early monuments of Kunya-Urgench, evidently dating between the thirteenth and fourteenth centuries of our era and located on the caravan route away from the Uzboy; b) the fortified caravanserai Talay-Khan-Ata, dating from the twelfth and thirteenth centuries, a round building almost identical in plan and construction with Dev-Kala; c) several much earlier reservoirs and a cistern on the banks of the Uzboy near Ak-Yail, fed by rainwater and snow conveyed by brick gutters placed roughly at a distance of a kilometer from the Uzboy. The Ak-Yail water conduit and the Talay-Khan-Ata are the only medieval monuments along the caravan route from Urgench to western Khurasan. Obruchev's attempt to see in them traces of ancient settlements is clearly not feasible. The only traces of irrigation discovered on the Uzboy were late medieval primitive fields on the bottom of the river bed near Bala-Ishem and Kurtysh. These fields were watered by rain and snow from the Ust-Yurt and the lakes of the Uzboy which were fed with it, obvious proof of the absence of a current of water during the fifteenth and sixteenth centuries.

DARYALYK AREA. Sharply contrasting with the lifeless desert of the Uzboy is the northeastern borderland of the Sarykamysh lowland, the zone of Daryalyk. Here in the entire area from Ust-Yurt to the old Daudan channel are spread out numerous ruins of manors and villages located on the well preserved dry canals along the Daryalyk and its tributary, the Kuurdzha-Uzyak, which bends around Butentau from the east and irrigates the neighborhood of Ak-Kala. Among the remains of the numerous settlements are the ruins of three cities: a) Ak-Kala, identified by Tolstov as the town of Andak mentioned by late fifteenth century sources; b) Shemakha-Kala, identified as Tersek, a town dating from the sixteenth and seventeenth centuries; c) Dev-Kesken, established as Vazir. Evidently the repeated destruction of the irrigation system of southern Khwarazm as a result of the Mongol invasions of the thirteenth century and of Timur (Tamerlane) at the end of the fourteenth, having released the waters of the Amu-Darya watershed

along the Daryalyk at Sarykamysh, created along the Daryalyk the flourishing western oasis. In turn the ruin of this oasis as a result of the drying up of the Daryalyk was caused by the restoration of agriculture in the main regions of Khwarazm. This is in accord with ancient stories, sources of the Uzboy legends as told by Abul Gazi.

SHEMAKHA-KALA is the most interesting of the monuments investigated. During the thirteenth century this early medieval town was attacked by the Mongols, who destroyed the curtain walls of the courtyards, leaving only the towers. In the fourteenth century the town was rebuilt without fortifications; its plan is well preserved, with streets and elaborate flagstone houses far beyond the limits of the old towers. Potters' quarters and blacksmiths' furnaces were excavated; there were two major mosques and many mausoleums on the outskirts of the city. At the porch of the city gate a stone capital was preserved whose volutes were decorated with roughly sculptured lions' heads. Abundant and varied pottery, along with material far surpassing the limits of earlier known forms of "Khwarazmian semi-faience" and real porcelain, significantly extend our information about the applied art of post-Mongolian Khwarazm.

SHASH-TEPE. Great interest was aroused by the complex of kurgans constructed at Shash-Tepe. In general each group contained one large kurgan (8-10 meters high) with a rectangular "court" (75×100 meters) next to it, surrounded by an

earthen rampart with exits on the two shorter sides; surrounding this were several groups of smaller kurgans forming either parallel chains or rings. One of the "courts" was built on a strange plan: from its long walls sprang perpendicular ramparts which were closed in at the end by small kurgans. This complex is extremely difficult to date without excavation.

KEREYLIN REGION. In addition to the work of the Uzboy-Sarykamysh group, archaeological surveys were carried out by the Ethnographical Section under T. A. Zhdanko in the Kereylin region of the Kara-Kalpak A.S.S.R. Here beside the Amu-Darya among a solid undergrowth of thick reeds the survey discovered the town of KHAYYAN-KALA, which yielded rich late Afrigid (seventh-eighth century) pottery. Transitional forms and tenth century pottery are comparable with types known primarily from Emukhshir and Narindzhan. Thus the period of the life of the city is determined to be from the seventh to the tenth centuries. This is the first known monument which links the Afrigid period and the Muslim culture of the Middle Ages. The plan of the city is particularly interesting—a regular network of straight streets divided one from the other by huge living quarters—showing that the traditional ancient Khwarazmian city of the Toprak-Kala type continued to the end of the Afrigid period. There is every reason to identify Khayyan-Kala with the early medieval town of Kerder (Kurder) mentioned in several tenth century sources.

NECROLOGY

STEPHEN B. LUCE, *Editor-in-Charge*

WILLIAM MILLER.—Word has belatedly been received of the death of William Miller, on October 23, 1945, in his eighty-first year. He was born in Wigton, Cumberland, England, on December 8, 1864, and was educated at Rugby and Oxford. His widow, whom he married in 1895, survived him.

To the strict classicist, this name may mean but little—to the student of Mediaeval or Modern Greece, it means everything. For he was without dispute the world's leading authority on the fascinating history of Greece under Frankish, Catalan, and Venetian rule. In his chapters in the *Cambridge Mediaeval History*, and in two great books, *The Latins in the Levant* (London, 1908) and *Essays on the Latin Orient* (Cambridge University Press, 1921) he covered, authoritatively and accurately, a field touched by but few, whom he superseded. Best of all, these books are written in a style of great charm and brilliance,—there is not a dull page in his writings. English-speaking peoples may be proud that in this field the leading authority is one of their own, and furthermore that he has brought to his subject an enthusiasm that renders his work captivating to his readers.

Even today, when events in Greece move with kaleidoscopic rapidity, his books on the modern country are most helpful. Over forty years ago, in 1905, he published *Greek Life in Town and Country*, a book which is still not without value; and in 1928 he published *Greece in the Modern World* series, a very useful and excellent book for the period in which it was written. He has published other books on the history of Modern Greece, the most notable being *The Ottoman Empire and its Survivors* (Cambridge University Press, 1913; second and enlarged edition, 1922, third edition, brought up to date, 1936). Unlike many British (or, for that matter, American) scholars of the Classics, he spoke Modern Greek fluently, and, as a result, had the confidence of the leading men in Hellenic public life. A shrewd judge of character, his appraisals of the politicians and statesmen who at various times were in power in the Athens of the period between the two World Wars, will be of exceptional importance to future historians of Modern Greece.

It is not surprising that such achievements should have received recognition. In his own country he was a Fellow of the British Academy and of the Royal Historical Society, while in Greece he was awarded the honorary degree of LL.D. from the University of Athens, and various other distinctions.

All this magnificent and scholarly work was, in a sense, a by-product,—for Miller was in his youth

trained for the bar, and became, early in his career, a journalist. From 1903 to 1937 he was the Balkan correspondent of the London *Morning Post*, which, during that period was, with the possible exception of the *Times*, the leading London daily. His services to his country in his reports to the Press cannot be over-estimated. If at times he felt himself a Cassandra, he cannot be blamed. Expert testimony such as his is not always respected in a democracy, where the policy is often determined by a majority of amateurs. It is literally true that today there is nobody to advise our Governments on Greek affairs who could speak with the same authority.

Miller was a familiar figure in Athens. Students at the British School, of which he was an Honorary Student, and in the Gennadeion, will miss his presence, his inquiring mind, and his quiet courtesy. He appeared at all the entertainments and open meetings given by the American and British Schools, and was always a welcome guest. His hospitality at his own apartment on Bessarion Street was simple, unaffected, and cordial. He was a pillar of the little Anglican Church in Athens, whose history he knew as no one else did, and on whose Vestry he served. To this writer he was always a helpful, kindly, and inspiring friend. *Requiem aeternam dona ei, Domine, et lux perpetua luceat ei.* (S. B. L.)

HANS SCHRADER, born February 15, 1869, at Stolp, Pomerania, when almost 80 years old died of a stroke September 6, 1948, at Berlin. He had been professor at the Universities of Innsbruck, Graz, Vienna, and last of Frankfurt. After his retirement he lived in Berlin. He excavated Priene in Asia Minor with Theodor Wiegand in 1895–1899. In the excellent publication, *Priene*, 1904, he has described the sanctuaries, the market place, the ekklēsiasterion and the prytaneion. About fifty years of his life were devoted to the study of Attic archaic sculptures. He has contributed much to the reconstructions of the marble statues found in the Persian debris on the Acropolis. Beside many articles in German periodicals he published two books in this field which appeared thirty years apart: *Archaische Marmorskulpturen im Akropolis-Museum*, 1909, and *Die archaischen Marmorbildwerke der Akropolis*, 1939. E. Langlotz (now professor in Bonn) and W. H. Schuchhardt (now Professor in Freiburg) collaborated with him in the latter book. These studies and books have much furthered our knowledge of early Attic sculpture.

Schrader's book *Phidias*, 1924, is a grandiose at-

tempt to reunite all literary and monumental evidence for this renowned master and to understand better early classical and Periclean sculpture. Unfortunately the title is misleading, for Schrader has taken away all decorative sculptures of the Parthenon from Phidias and given them to Alkamenes and Paionios, to whom he also attributes with Pausanias the sculptures

of the temple of Zeus at Olympia. Despite this delusion the book is full of correct observations and fine remarks, testifying to a sensitive understanding of great art. Like everything Schrader published, it is excellently written and beautifully illustrated. (Margarete Bieber)

ARCHAEOLOGICAL DIGEST

C. BRADFORD WELLES, *Editor*

The Editor wishes to thank those who have helped him in abstracting the material for this issue of the *Digest*. They are Gordon F. Ekholm, Elizabeth C. Evans, Henry Field, Harold N. Fowler, Sarah Elizabeth Freeman, J. Frank Gilliam, Dorothy K. Hill, Harald Ingholt, Frances F. Jones, John L. Caskey, William A. MacDonald, Paul L. MacKendrick, Giacinto Matteucci, W. Kendrick Pritchett, John H. Rowe, and Gordon R. Willey. The following are the principal periodicals reviewed: *Acta Archaeologica*, xvii, 1-3 (1946); *Aegyptus*, xxvi (1946); *Annual of the British School in Athens*, xlii (1947); *Antiquaries Journal*, xxvi, 3/4 (1946) - xxviii, 1/2 (1948); *L'Antiquité Classique*, xvi, 1 (1947); *Archaeologia*, xcii (1947); *Archivo de Prehistoria Levantina*, ii (1945); *Athenaeum*, N.S., xxvi, 1/2 (1948); *Bulletin of the Türk Tarih Kurumu*, xi (1947); *Berytus*, ix, 1 (1948); *Bulletin archéologique du Comité des travaux historiques et scientifiques*, 1945-1946; *Bulletin de correspondance hellénique*, lxx (1946); *Bulletin de la Société royale d'archéologie d'Alexandrie*, 37 (1948); *Bullettino Comunale*, lxvii (1939) - lxviii (1946); *Chronique d'Égypte*, 45/46 (1948); *Études de papyrologie*, vii (1948); *Hesperia*, xvii, 1-2 (1948); *Journal of Egyptian Archaeology*, xxxiii (1947); *Journal of Hellenic Studies*, lxxv (1945); *Journal of Near Eastern Studies*, vii, 1-3 (1948); *Mélanges d'archéologie et d'histoire of the École française de Rome*, lviii (1941-1946); *Mélanges Université Saint-Joseph*, xxvi (1944-1946); *Mnemosyne*, 3d Ser., xiii, 2 (1947); *Orientalia*, N.S., xvii, 4 (1948); *Palestine Exploration Quarterly*, January-April, 1948; *Revue des études anciennes*, xlv (1943) - xlix (1947). For many services I am indebted to my assistant, James F. English Jr. The volume of material to be covered in this issue has made the abstracts shorter than is the normal policy.

GENERAL AND MISCELLANEOUS

BIBLIOGRAPHY.—The 1945-1946 edition of *L'Année Philologique* (Paris, Les Belles Lettres, 1948), edited by Juliette Ernst under the aegis of Professor J. Marouzeau, contains nearly a hundred pages of archaeological bibliography (pp. 235-333).

EPIGRAPHY.—Alf. Merlin has issued the 1947 edition of *L'Année Epigraphique, Revue des Publications Epigraphiques relatives à l'Antiquité Romaine* (Presses Universitaires de France, Paris, 1948).

ART THROUGH FIFTY CENTURIES.—All phases of art, Middle Eastern, classical, American, and Far Eastern, are beautifully illustrated in a brochure of this title, published by the Trustees of the Worcester Art Museum (Worcester, 1948), a catalogue of notable objects in the museum.

ANTHROPOLOGY AND PREHISTORY OF THE MIDDLE EAST.—Further report on the University of California African Expedition of 1947/48 is supplied by Henry Field in the *American Anthropologist*, 1, 3 (July-September, 1948), pp. 479-493. Important link stations of the Palaeolithic (going back to the Acheulian) were found in the Wadi al-Arish (especially at Al-Rawafa) and over to the gulf of Sinai at Abu Zunaimah.

ANCIENT DEVICES FOR RAISING WATER.—Under the title of "Some Archaic Mining Apparatus," Douglas Rennie Hudson discusses and illustrates various of this sort from the Archimedian screw to the wheel and the windlass, and considers their use in the mines of antiquity (*Metallurgia*, January, 1947, pp. 157-164).

SHOULDER ORNAMENT OF LIONS.—A. J. Arkell adds a note to Miss Kantor's study of this decorative motif, with the suggestion that her "torsional hair stars" are based on observation of the hair whorls on actual lions. (*JNES*, vii, 1 [January, 1948], p. 52.)

PALMA ET LAURUS.—It is these words which H.-I. Marrou (*École Française de Rome, Mélanges d'Archéologie et d'Histoire*, lviii [1941-1946], pp. 109-131) would see in a monogram frequently occurring on medallions and inscriptions of the fourth and fifth centuries. They are a tribute to the influence of the circus on people's minds in the later Empire.

GREECE

General and Miscellaneous

ELIS.—A. Bon in *BCH*, lxx (1946), pp. 15-31, publishes notes made between 1929 and 1938 on tours of little-known sites in Elis. (W. K. P.)

AMARI.—In *BSA*, xlii, 1947, pp. 184-193; 2 figs., T. J. Dunbabin lists forty-seven sites of archaeological interest in the district of Amari. Finds range from E.M.I. to mediaeval times. A list of 98 newly found sites in other parts of Crete is added from reports by N. Platon, by U. Jantzen (*Veste Kreta* [German newspaper], Feb. 18, 1943), by F. Schachermayr ("Vorbericht über eine Expedition nach Ost-Kreta," *AA*, 1936, 466 ff.), and by Greek archaeologists in *Epeteris Etaireias Kretikon Spoudon*. (H. N. F.)

ASTAKOS.—In *BSA*, xlii (1947), pp. 156-183; pls. 13-30; 14 figs., S. Benton describes a cave, near the church of Hagios Nikolaos not far from Astakos

on the coast of Akarnania, and the objects found in it, especially the neolithic pottery. Dimini spirals came from the Danubian region, but not by conquest. The Thessalian shapes owed much to the Cyclades. Astakos must have been a center of trade from East to West and also with Corinth. The pottery shows connections with Thessaly, the Cyclades, and other regions, but is not identical with that of any other site. The collection of flints (flint is not common in Greece) is noteworthy. (H. N. F.)

SUNIUM.—In *BSA*, xlii (1947), pp. 194-200, E. J. A. Kenny publishes the docks and shipsheds at Sunium. (H. N. F.)

THESSALIAN STUDIES.—In *BCH*, lxx (1946), pp. 9-14, Y. Béquignon summarizes the finds at the small Thessalian site of Narthakion. Excavations in 1932 revealed part of a chapel, the plan of which remains incomplete, a Byzantine column base and other architectural fragments. (W. K. P.)

In *Gazette des Beaux-Arts*, Ser. VI, xxxiv (February, 1948), pp. 65-76, Ilona Deak-Ebner discusses "The Sickle-Shaped Wing in Ancient Art." The particular form eventually adopted by Greek artists of the archaic period was not used by Egyptians or the peoples of Mesopotamia or even by the earliest Greeks, and seems to have developed in the Peloponnese. (D. K. H.)

THE HOPLITE PHALANX.—In *BSA*, xlii (1947), pp. 76-138, H. I. Lorimer writes of "The Hoplite Phalanx with Special Reference to the Poems of Archilochus and Tyrtæus." The phalanx was the result of the change from the round shield hung on a telamon and having a central hand-grip to a round shield with a central arm-band of metal (porpax), through which the bearer thrust his arm to the elbow, and a hand-grip (antilabe) just within the edge of the shield, which he grasped with his left hand. Before the hoplite phalanx came into use, the spear (the warrior usually carried at least two) was used for throwing rather than for thrusting, and combat was in general at long range rather than hand to hand. Archaeological and literary evidence shows that the change to the hoplite shield (and therefore to the hoplite phalanx) took place in almost all regions in the first quarter of the seventh century.

Appendix I treats of supplementary armour—protective pieces for arms, shoulders, thighs, and waist, and lighter corslets.

Appendix II (with pl. 18a) is devoted to the shields of Tiryns. One of these (A) is interpreted as the battle between Achilles and Penthesilea. The date cannot well be later than 750 B.C. (H. N. F.)

A HOPSCOTCH PLAYER AT PHILIPPI.—J. Coupry in *BCH*, lxx (1946), pp. 102-105, discusses the engraved lines for games of hopscotch found on the pavement

of the great north hall of the market place at Philippi. (W. K. P.)

Architecture

MEGARON B. AT THERMOS.—In an article in *BCH*, lxx (1946), pp. 51-57, J. A. Bundgaard rejects the theory that this early megaron may have furnished the model for the archaic Doric temple which was later built over it. (W. K. P.)

FENESTRARUM IMAGINES.—Under this Vitruvian title, R. Demangel in *BCH*, lxx (1946), pp. 132-147, continues his investigation of the origin of the Doric frieze, answering the objections to his thesis, that the frieze is a survival of the primitive ventilating and lighting system, by Paola Zancani-Montuoro. (W. K. P.)

THE GYMNASIUM AT EPIDAUROS.—J. Delorme in *BCH*, lxx (1946), pp. 108-119, locates the bath in four small rooms on one side of the building. (W. K. P.)

PORTICO OF THE ATHENIANS AT DELPHI.—P. Amandry in *BCH*, lxx (1946), pp. 1-8, determines the date of the portico. Architecturally, the column capitals and the inscription on the stylobate fit the time of the naval expedition of 479-8. He surmises that they brought back the Persian cables and hung them by way of commemoration on the polygonal wall. (W. K. P.)

Sculpture

Charles Seltman discusses "Greek Sculpture and Some Festival Coins" in *Hesperia*, xvii, 2 (April-June, 1948), pp. 71-85. (P. L. MacK.)

The relation between coinage and sculpture is the subject of J. H. Jongkees' "Notes on the Coinage of Athens; VII, *O Demos* and Antenor's Tyrannoktones," in *Mnemosyne*, 3d Ser., xiii, 2 (1947), pp. 145-160.

TERRA-COTTA HEAD OF THE LATE ARCHAIC PERIOD.—In the *BMMA*, January, 1948, pp. 150-153, Gisela M. A. Richter describes a life-sized, female, terra-cotta head acquired from the Brummer collection. It is well preserved, and dates from about 500-490 B.C.

SCULPTURE.—Three studies of the difficult problem of the metopes of the north side of the Parthenon by B. Schweitzer, published just before the War, have led Ch. Picard to a re-examination of the whole question (*REA*, xlvii [1945], pp. 177-213). His conclusion is a reaffirmation of the view of C. Praschniker in his *Parthenonstudien*, that these metopes represented a single subject, the Iliupersis, and were to be read from west to east. The metopes of the south, on the other hand, which were to be seen only individually by the curious visitor, are not confined to the subject of the Centauromachy.

David M. Robinson publishes "A New Herakles Relief" (*Hesperia*, xvii, 2 (April-June, 1948), pp. 137-140) dated by him in the first half of the fourth century B.C. (P. L. MacK.).

A FEMALE HEAD IN THE LOUVRE.—J. Charbonneaux in *BCH*, lxx (1946), pp. 91-96, publishes a small head of Parian marble, executed by an associate or follower of Scopas. (W. K. P.)

A marble head acquired from Rome in the early Nineties is identified by Vagn Poulsen as that of Periandros, tyrant of Corinth, son of Kypselos (*Meddelelser fra Ny Carlsberg Glyptothek*, i [1944], pp. 22-26). Periandros was one of the "Seven Wise Men" of antiquity, a group first known in the fourth century B.C. (H. L.)

THASIAN RELIEF.—P. Devambiez in *BCH*, lxx (1946), pp. 164-171, studies a relief in the museum at Thasos. It does not fall into any one of Rhomaioi's four types for banquet scenes, but represents a *thiasos*. (W. K. P.)

A SCULPTOR OF CYRENE.—F. Chamoux in *BCH*, lxx (1946), pp. 67-77, presents a colossal and well-preserved figure of Zeus with the aegis, now in the museum at Cyrene, dated 138 A.D. (W. K. P.)

Gems

CRETAN GLYPHICS AND MINOAN CIVILIZATION.—F. Chapouthier in *BCH*, lxx (1946), pp. 78-90, discusses a prismatic intaglio of steatite from Mallia in Crete, one face of which bears a representation of a jug above a pair of horns of consecration. He suggests that the two figures are symbols of writing. (W. K. P.)

CRETAN GEM.—P. Demargne in *BCH*, lxx (1946), pp. 148-153, presents a study of a gem found in a private house in Mallia. Of white sardonyx, almond-shaped (a form current in Late Minoan I), it shows a bearded figure in a long robe, carrying a mallet-shaped object over his shoulder. Possibly there is some connection with the north Syrian storm god, who holds the double axe. (W. K. P.)

FECUNDITY RITES.—Ch. Delvoye publishes in *BCH*, lxx (1946), pp. 120-131, a seal from Zakro, Crete, showing, in a ritual setting, a female statuette with bell-shaped skirt, placed obliquely in the field. The author believes that this oblique position was intentional, and that the figure is shown as swinging. This may have to do with fecundity rites. (W. K. P.)

MINOAN INTAGLIO.—In the *REA*, xlix (1947), pp. 22-24, Fernand Chapouthier describes a new example of the *potnia theron* on a Late Minoan II intaglio in brown onyx, probably from Crete, copied by him in a shop in Athens.

Vases

FOUR PRE-HELLENIC VASES.—In *L'Antiquité Classique*, xvi, 1 (1947), pp. 47-58, Charles Delvoye

publishes four vases of the Musée Archéologique de Charleroi, acquired in the last century from clandestine excavations on Antiparos, and all of Early Cycladic I (3000-2800 B.C.).

THE MYCENAEAN POTTERY OF ATTICA.—In *BSA*, xlii (1947), pp. 1-75, F. H. Stubbings presents a study of Mycenaean (L. H. III) pottery in Attica. (H. N. F.)

ATHENIAN WORKSHOPS AROUND 700.—In *BSA*, xlii (1947), pp. 139-155, J. M. Cook writes about Athenian potteries around 700 B.C. (H. N. F.)

A GEOMETRIC GRAVESIDE SCENE.—J. M. Cook in *BCH*, lxx (1946), pp. 97-101, publishes a late Geometric pitcher excavated at Kynosarges, now in the library of the British School at Athens. (W. K. P.)

VASES.—F. Villard devotes a study in *REA*, xlviii (1946), pp. 153-181, to the Attic black-figured cups of the period 580-480 B.C.

ATHENIAN ARYBALLIC LEKYTHOS.—Ch. Dugas in *BCH*, lxx (1946), pp. 172-178, publishes a red-figured aryballic lekythos from Athens, in a private collection, dating ca. 500 B.C. (W. K. P.)

In *Bulletin of the Art Association of Indianapolis, Indiana*, vol. xxxiv, October, 1947, no. 2, pp. 19-22 and cover, Dorritt Raymond Stevens describes and illustrates nine Attic vases given to the John Herron Art Institute by Mr. and Mrs. Eli Lilly. (D. K. H.)

VASES FROM ODOS PANDROSOU.—S. P. Karouizou describes in *JHS*, lxx (1945), pp. 38-44, two lekythoi from the shops of antique dealers in Odos Pandrosou, Athens. (E. C. E.)

A GREEK RED-FIGURED VASE FROM LORRAINE.—B. M. Bulard publishes in *BCH*, lxx (1946), pp. 42-50, a crater belonging to the archaeological institute of the Faculté des Lettres of Nancy, dated late fifth century, belonging to the class of vases exported from Athens and serving as models for South Italian painters. (W. K. P.)

Virginia Grace, "Rhodian Jars in Florida," *Hesperia*, xvii, 2 (April-June, 1948), pp. 144-147. The Ringling Museum in Sarasota contains the third largest collection in the world of Rhodian amphorae with dateable stamps. (P. L. MacK.)

Numismatics

FORGERIES OF MACEDONIAN COINS.—H. Gaebler presents the fifth installment of his study of these forgeries in *SB Preuss. Akad.*, 1938, pp. 353-370. Many of the forgeries are credited to C. Christodoulos. (J. F. G.)

Epigraphy

BIBLIOGRAPHY.—Jeanne and Louis Robert continue their bibliographical series entitled "Bulletin Épigraphique" in the *REG*, lxx/lx (1946/47), pp. 299-372.

The "mnesthe" Formula. Albert Rehm in *Philologus*, xciv, 1/3 (n.d.), pp. 1-30, examines the variety, range, and meaning of this formula, starting from an incised tile found in excavations at Aphiona on Korfu. He distinguishes two sources of the conceit, the Syrian, where the Greek formula simply follows the Aramaic participle *dakir* (may he be) "remembered," and the Greek, where the *mnesthe* element is commonly followed by *ep' agathoi* or other explanatory phrase.

L. H. Jeffery, "The Boustrophedon Sacred Inscriptions from the Agora," *Hesperia*, xvii, 2 (April-June, 1948), pp. 86-111, publishes 31 fragments from a monument found 1936-39 on the northwest slope of the Acropolis, near the site of the Eleusinion. They can be dated by letter-styles to 510-480 B.C. (P. L. MacK.).

B. D. Meritt, *Hesperia*, xvii, 1 (Jan.-Mar., 1948), pp. 1-53, discusses 64 inscriptions from the Athenian agora, of which the majority are hitherto unpublished decrees, dedications and grave monuments. (P. L. MacK.)

W. S. Ferguson, *Hesperia*, xvii, 2 (April-June, 1948), pp. 112-136, publishes a decree of the Athenian phyle Akamantis, found in the Agora in 1947, and dating in 302 B.C. (P. L. MacK.)

David M. Robinson publishes "Three New Inscriptions from the Deme of Ikaria," in *Hesperia*, xvii, 2 (April-June, 1948), pp. 141-143. (P. L. MacK.)

A. G. Woodhead in *Hesperia*, xvii, 1 (Jan.-Mar., 1948), pp. 54-60, publishes an honorific decree for a proxenos of Athens in Ialysos, dated ca. 394 B.C. (P. L. MacK.)

During the early war years, Werner Peek published a number of papers dealing with Greek inscriptions.

1) In *Philologus*, xciv, 4 (n.d.), pp. 330-332, he publishes for the first time an archaic inscription on a strip of bronze, probably a Spartan dedication in Olympia about 550 B.C.

2) In *AM*, lxvi (1941), pp. 47-86, he publishes or emends 29 texts, from Attica, Boeotia, the Megarid, the islands, and Asia Minor, more than half of them new.

3) Under the title "Attische Urkunden," Peek publishes, with N. Kyprissis, in the *AM*, lxvi (1941) pp. 218-239, eight new Attic inscriptions dating from the fifth to the second centuries B.C.

4) In the same issue of *AM* (pp. 171-217), Peek publishes a number of new "Heilige Gesetze" of great interest.

5) In three smaller publications, Peek publishes a Samian epigram of the excavations of 1934 for a historian Leon (about 150 B.C.; *Klio*, xxxiii [1940], pp. 164-170), four assorted epigrams from Delos (*Hermes*, lxxvi, 4 [1941], pp. 408-416), and two agonistic epi-

grams from Rhodes, (*ibid.*, lxxvii, 2 [1942], pp. 206-211).

MORTGAGE INSCRIPTIONS. —David M. Robinson publishes in the *AJP*, lxix, 2 (1948), pp. 201-204, three new *horoi* found by him in Attica in 1947.

DEDICATION OF THE LIPARAIOTI AT DELPHI. In the *REA*, lxxv (1943), pp. 40-48, Jean Bousquet reports on the discovery of new fragments of inscribed blocks, which indicate that there must have been at least two dedications on the upper terrace.

INSCRIPTIONS FROM THESSALONICA. —Charilambos I. Makaronas publishes in the *Epeteria* of the Philosophike Schole of the University of Thessalonica (vi, 1948, pp. 293-308) three interesting inscriptions found in that city dealing with the stadium-gymnasium of early times, and the stadium-baths-gymnasium of the Empire.

SOME PUBLISHED INSCRIPTIONS FROM ROMAN CYPRUS. —In *BSA*, xlii (1947), pp. 201-230, T. B. Mitford revises fifteen Greek inscriptions of imperial Roman times from Cyprus. (H.N.F.)

THRACE

ROMAN THRACE. U. Instinsky publishes a newly discovered milestone of the time of Severus Alexander from Pautalia in *SB Preuss. Akad.* 1938, pp. 418-425. (J.F.G.)

TURKEY

DISCOVERIES AT KARATEPE IN THE AMANUS. This sensational site is being explored by a Turkish expedition, and a preliminary report appears under the auspices of the Istanbul University from the pens of H. Th. Bossert and U. Bahadır Alkım (Karatepe, Kadirli ve Dolaylari; Istanbul, 1947). The major interest lies in the great Phoenician inscription on the statue of king Azitawaddu, which Julian Obermann ("Discoveries at Karatepe," Supplement to the *JAOS*, 9, 1948) would date late in the ninth century. Ralph Marcus and I. J. Gelb publish their translation of two columns of the inscription, *JNES*, vii, 3 (July, 1948), pp. 194-198. An editorial note mentions two other treatments of the text which I have not seen: J. Friedrich, *FuF*, xxiv [1948], pp. 76-79, and C. H. Gordon, *Jewish Quarterly Review*, xxxix [1948], pp. 41-50.

TWO PHRYGIAN TUMULI AT ANKARA. —The work was conducted by T. Özgüç, and M. Akok, who publish a comprehensive report in *Belleten*, xi (1947), pp. 27-85, (with German version by H. G. Güterbock).

Each mound covered a rectangular pit which had been cut in the native rock. In one were remains of a wooden case 2.50 m. wide by 3.50 m. long, containing a wooden bench, 8 cinerary urns, a bronze tripod and one of iron, fragments of numerous bronze vessels, a

gilded phiale mesomphalos, bronze spearheads, and a belt and buckle. This tomb was filled with a deep layer of pebbles. The other had a rough stone wall in place of the wooden chest. The contents were similar to those of the first tumulus, but the filling in this case was of earth. Both are to be dated probably in the eighth century, certainly in the flourishing period of Phrygian culture before the Cimmerian invasion. (J.L.C.)

SCULPTURE. Under the title "Reliquiae Antiochenae," Père René Mouterde publishes in the *Mélanges de l'Université Saint Joseph*, xxvi (1944-1946), pp. 39-44, three notes on sculptures in the Antioch Museum. The first concerns a marble rendering of the sleeping slave, the second some sarcophagi decorated with garlands, and the third, the tombstone of a woman shown with a box of rolls of papyrus.

ANTIOCH MOSAICS.—In an extended review of Doro Levi's *Antioch Mosaic Pavements* (JNES, vii, 2 [April, 1948], pp. 91-97), Clark Hopkins calls attention to the importance of oriental parallels, as seen particularly at Dura, for the interpretation and dating of these monuments.

LEBANON AND SYRIA

TWO PHOENICIAN SANCTUARIES.—In a posthumous publication in the *Mélanges de l'Université Saint Joseph*, xxvi (1944-1946), pp. 83-97, the notes of the late S. Ronzevalle have been assembled on the relief of Wadi Ashur, and on the buildings on the Jebel Saïda near Kafroun.

ARCHITECTURAL MOULDINGS.—Profiles of the Dura mouldings are collected and studied in *Berytus*, ix, 1 (1948), pp. 1-40, by Lucy T. Shoe. Her evidence establishes 1) "the tenacity of Greek influence in moulding types in contrast to the cessation of Greek influence in most other details of Dura's art and culture of the Parthian period, and (2) the almost total absence of any Roman architectural influence on mouldings of the Roman period."

INSCRIPTIONS.—Under the title "Antiquités et Inscriptions," Père René Mouterde publishes a series of notes and texts in the *Mélanges de l'Université Saint Joseph*, xxvi (1944-1946), 45-79.

In *Berytus*, ix, 1 (1948), pp. 45-49, Charles C. Torrey publishes a bronze tablet from Syria, a dedication to a god "Saraptenos" (i.e., of Sarepta), and would connect it with the Syrian colony in Puteoli because the dedication is made by *synegedemos*, which he takes to be a common noun meaning "fellow exile."

COMMENT.—This is rather the name of the dedicant, *Synegedemos*. C.B.W.

NUMISMATICS.—In a note dealing with the coinage of Petra in *Berytus*, ix, 1 (1948), pp. 40-42, Stella Ben-Dor, decides that "Petra and Bostra may have

been made colonies simultaneously . . . between June 221 and March 222."

PALESTINE

EGYPTIAN TEMPLES IN PHILISTIA.—Starting from the record of an Egyptian temple of Amun in Gaza, established probably under Thutmose III, and one of Ptah at Ascalon, in the time of Ramesses II and Merneptah, A. Alt examines the tradition of the Egyptian rule along the southern coast, and comes to the conclusion that this region, as far north as Japho, was a tightly held Egyptian district in the fourteenth and thirteenth centuries. Later, with the weakening Egyptian power, Ramesses III settled the Philistines here as vassals, and it was precisely this area which formed Philistine territory prior to their imperial expansion in the eleventh century. (*Zeitschrift des deutschen Palästina-Vereins*, lxvii, 1 [1943], pp. 1-20.)

ROYAL CEMETERY AT JERUSALEM.—S. Yeivin discusses again the problem of the burial place of the kings of David's line, and concludes that "their catacombs should be looked for at the southern end of" the "inner citadel." (JNES, vii, 1 [January, 1948], pp. 30-45.)

SOLOMON'S TEMPLE.—J. L. Myres discusses a number of technical features of this and associated buildings in *PEQ*, January-April, 1948, pp. 14-41. G. Ernest Wright and Leroy Waterman exchange opinions on the latter's theory of the temple building in JNES, vii, 1 (January, 1948), pp. 53-55.

NUMISMATICS.—Stella Ben-Dor publishes (*PEQ*, January-April, 1948, pp. 59-63) a coin of Demetrius II with the Ptolemaic eagle on the obverse, which she thinks struck in Seleucia in Pieria in 147/6 for the new king by his uncle Philometor, and one known in seven examples, which she ascribes to Antiochus VII in Gaza.

HEBREW MANUSCRIPTS.—The discovery of early Hebrew manuscripts from a cave north of the Dead Sea is briefly discussed by G. Ernest Wright in the *Biblical Archaeologist*, xi, 2 (1948), pp. 21-23, and more fully, *ibid.*, 3, pp. 46-61, by John C. Trever and Millar Burrows.

EGYPT

EXCAVATIONS.—Pierre Montet gives a survey of excavations in Egypt in the *Chronique d'Égypte*, 45/46 (April, 1948), pp. 36-50. A report covering the period 1946-1948 of excavations is published by Ursula Schweitzer in *Orientalia*, N. S., xvii, 4 (1948), pp. 536-545.

THE PYLON OF KHONSU AT KARNAK.—Writing in the *Chronique d'Égypte*, 45/46 (April, 1948), 17-21, Pierre Gilbert expresses the opinion that the pylon dates from the time of Amenhotep III, while the rather poor temple itself is a later reconstruction.

COLOSSAL STATUES IN THE SUDAN.—Dows Dunham (*JEA*, xxxiii [1947], pp. 63–65) describes four colossal royal statues from the quarries at Tumbus near the Third Cataract, and would identify them with kings of Kush, Taharka (ca. 650 B.C.), Ergamenes (225–200 B.C.), and Natakamani (15 B.C.–A.D. 15).

SCULPTURE.—Writing in the *JNES*, vii, 3 (July, 1948), pp. 163–179, Miriam Lichtheim publishes a small statue of "The High Steward Akhamenru," represented in the "cubic crouching posture," and assembles the seven other representations of this dignitary, high steward of the Divine Consorts of Amun under the Twenty-Fifth Dynasty.

FIGURINE OF A HUMPAK. Dr. Frans Jonckheere publishes in *Chronique d'Égypte*, 45/46 (April, 1948), pp. 24–35, a wooden figurine from the *Musées royaux d'Art et d'Histoire de Bruxelles* which shows the peculiar deformity due to vertebral tuberculosis. Pierre Gilbert, in a note, dates the figurine in the Protodynastic Period.

ROMAN POTTERY.—Writing in the *Bulletin de la Société Royale d'Archéologie d'Alexandrie*, No. 37 (1948), pp. 47–57, Alan J. B. Wace publishes six fragments of Late Roman "A" pottery from the collection of Loukas Benachi in Alexandria.

BRACELET PLAQUES FROM THE REIGN OF AMENHOTEP III.—Four of these plaques which may have been made for the king's first Heb-Sed festival (1375 B.C.) are published by William C. Hayes, *BMM*, June, 1948, 272–279.

OSTRICH EGG OF THE AMRATIAN PERIOD. Of all the uses to which ostrich eggs were put in antiquity, the most peculiar is the practice in pre-dynastic Egypt of putting into tombs eggs (or the models of eggs), intact except for the small hole through which the original contents had been removed, and frequently decorated with painted or incised designs. One of these at the Oriental Institute in Chicago is published by Helene J. Kantor in *JNES*, vii, 1 (January, 1948), pp. 46–51.

NUMISMATICS.—The second hoard from El-Kab is published in *Chronique d'Égypte*, 45/46 (April, 1948), pp. 102–180, by Jean Bingen. The hoard contains pieces from A.D. 324, and was buried about A.D. 379.

STELE OF THE MIDDLE KINGDOM. A limestone stele in the Metropolitan Museum in New York is published by William C. Hayes in *JEA*, xxxiii (1947), pp. 1–11. The subject is a priest who lived under the last Pharaoh of the Thirteenth Dynasty, whose power extended from Nubia to Memphis and beyond.

INSCRIPTIONS OF THE SPEOS ARTEMIDOS. In *JEA*, xxxiii (1947), pp. 12–33, H. W. Fairman and Bernhard Griseloff publish the smaller inscriptions of Hatshepsut and Sethi I.

GRAFFITI OF THE MIDDLE AND NEW KINGDOMS AT THE WADI AL-'ALLAKI IN NUBIA. A number of brief inscriptions and drawings on the rocks of the wadi testify to its use as a route to the gold mines (Jaroslav Černý, *JEA*, xxxiii [1947], pp. 52–57).

INSCRIPTION FROM NAUCRATIS.—Under the title of "A Dedicatory Stele from Naucratis," Zaki Ali publishes in the *Études de Papyrologie*, vii (1948), pp. 73–92, a fragmentary block from Naucratis. The Greek script is of the third or second century B.C., and the text consists of two fragmentary columns of names, perhaps of soldiers.

HIERATIC OSTRACA. William C. Hayes examines in *JNES*, vii, 1 (January, 1948), pp. 1–10, a group of letters of the Eleventh Dynasty, recovering an elaborate standardized formula of greeting.

PAPYROLOGICAL BIBLIOGRAPHY.—In *Aegyptus*, xxvi (1946), pp. 191–201, Aristide Calderini continues his list of "Testi Recentemente Pubblicati," nos. 6258–6438, mainly from P. Rein. II and P. Princeton III. Marcel Hombert and Claire Préaux continue their survey of "Papyrus littéraires et Documents" in the *Chronique d'Égypte*, 45/46 (April, 1948), pp. 191–208.

Marie-Thérèse Lenger publishes in the *Chronique d'Égypte*, 45/46 (April, 1948), pp. 109–121, three unpublished papyri from the Bodleian. They are of great interest, for while they do not seem to belong to the Zenon archives, they come from Philadelphia and date from around 250–247 B.C.

An interesting cession (*ekchoresis*) of A.D. 104 is published in *Athenaeum*, N.S., xxvi, 1/2 (1948), pp. 76–82, by Mario Amelotti.

A papyrus of the Michigan collection (Inv. 4686) is published by Herbert C. Youtie in *The Harvard Theological Review*, xii, 1 (January, 1948), pp. 9–29. It is a letter of the early third century of our era, written by a son who has become agoranomos of Sarapis for the god's annual *Kline* (festival).

A. E. R. Boak publishes in the *Études de Papyrologie*, vii (1948), pp. 53–71, nine additional texts from the archives of Aurelius Isidorus of Karanis (nos. 31–39), of the early fourth century.

IRAQ

SUMERIAN TABLETS OF THE THIRD DYNASTY OF UR.—Twenty tablets from the Egyptian Museum in Turin, belonging to the reigns of Bur-Sin and Gimil-Sin, are published in *Aegyptus*, xxvi (1946), pp. 149–183, by Giovanni Rinaldi. They are accounts or receipts, concerning the shipment of sacrificial animals.

IRAN

BEHISTUN INSCRIPTION.—An attempt to restore the fragmentary end of the Old Persian text, based on the study of Kent and with the advice of Cameron, is

made in *JNES*, vii, 2 (April, 1948), pp. 106-110, by Wilhelm Eilers.

ITALY

THE TEMPLE OF APOLLO IN ROME.—The results of the excavations on the site of the Temple of Apollo in Rome are discussed by A. M. Collini in the *Bullettino Comunale*, lxxviii (1940), pp. 5-40.

THE CAMPUS MARTIUS.—In a paper entitled "Il Campo Marzio nell' Antichità" (*Memorie Accademia dei Lincei*, Ser. VIII, i, 1947, pp. 91-193), F. Castagnoli discusses certain questions bearing on the history and the topography of the Campus Martius.

SANCTUARY OF CYBELE AT OSTIA.—The large and important temple of the Magna Mater which was excavated at Ostia during the first part of the war is the subject of a long memoir by Mrs. Raissa Calza in the *Mem. della Pont. Acad. Rom. d'Archeologia*, Ser. 3, vi (1946), pp. 183-227, the substance of which is repeated by A. Grenier in *REA*, xlix, 3/4 (1947), pp. 380-386.

GREEK THEATERS OF MAGNA GRAECIA.—The problem of the existence or non-existence of a *logeion* in these theaters, and some other architectural problems, are examined by Biagio Pace in *Dioniso*, x, 4 (1947), pp. 266-291.

JULIO-CLAUDIAN ICONOGRAPHY. Vagn Häger Poulsen publishes in *Acta A*, xvii, 1-3, 1946, pp. 1-48, a profusely illustrated study of the sculptured representations of the Julio-Claudian family. The same author deals in the 1945 fascicle of the *Meddelelser fra Ny Carlsberg Glyptothek* (ii, pp. 1-20) with the three marble heads of Augustus, Tiberius and Livia, acquired in 1895 from the Fayum.

The heads of Vespasian, of Titus and of Domitian in the Glyptothek are discussed by Gjoedesen (*ibid.*, iii [1946], pp. 40-48) with comparison of other portraits of the Flavian emperors. (H.I.)

ETRUSCAN RELIEFS OF THE HELLENISTIC PERIOD. G. M. A. Hanfmann in *JHS*, lxxv (1945), pp. 45-57, presents an account of the manner in which the changing styles of Greek Hellenism are reflected in later Etruscan reliefs. (E.C.E.)

SCULPTURE.—Leveling operations along the Via del Mare in the vicinity of the Government buildings in Rome, shortly before the War, brought to light two remarkably fine statues, which are published in the *Bullettino Comunale*, lxxviii (1940), pp. 41-58, by Michelangelo Cagiano de Azevedo. The male statue is a Hermes, showing the influence of the greater statues of the fifth and fourth centuries, but still good Attic work in Pentelic marble of about 200 B.C. The female statue is an Aphrodite Anadyomene, Italian work in the style of the Rhodian school.

Pliny in his *Natural History*, xxvi, 29, describes

the sculpture in the Schola of the Portico of Octavia, and adds at the end, among unknown artists' work, *duae Aurae velificantes sua veste*. These sculptures must have been earlier than the well-known Aurae of the Ara Pacis, and G. E. Rizzo in the *Bullettino Comunale*, lxxvii (1939), pp. 141-168, discusses the source of the type. This he would find in the reverse of the coins of Camarina, which show a young woman, velificans sua veste, riding on the back of a swan. She is Camarina, the nymph of the lake which gave its name to the city, and represents one of the two Aurae, the other being the sea-wind (Aristotle, *De Mundo*, 4, 394^b 13).

ETRUSCAN TOMB PAINTINGS.—A collection of photographs and copies of Etruscan tomb paintings was made by the founder of the Ny Carlsberg Glyptothek Carl Jacobsen during the years 1894-1913. Its history is given by Mogens Gjoedesen (*Meddelelser fra Ny Carlsberg Glyptothek*, iii [1946], pp. 3-29). (H.I.)

INSCRIPTIONS.—A fragmentary inscription from Potentia contains extensive remains of the *Fasti Consulares* for the years 86-116 post Christum natum (Nereo Alfieri in *Athenaeum*, N.S., xxvi, 1/2 [1948], pp. 110-134).

NORTH AFRICA

ACTIVITIES IN MOROCCO 1942-1943.—In *BCHT*, May, 1945, pp. xii-xxiii, R. Thouvenot presents a summary of archeological activities in Morocco, 1942-1944, and *ibid.*, April, 1946, pp. x-xix, on those of 1945. Excavations in classical antiquity centered at Banasa and Volubilis.

EXCAVATIONS IN THE VALLEY OF THE CHELIF.—Tigava Castra is mentioned by the Antonine Itinerary, and its location was determined by Raymond Bloch, two miles from the ancient site of Tigava, in 1939. A short campaign of excavations made it possible to determine some of the features of the camp. (Raymond Bloch, *École Française de Rome, Mélanges d'Archéologie et d'Histoire*, lviii [1941-1946], pp. 9-42.)

MACOMADES-IUNCI IN TUNISIA.—The discovery of a milestone marking the second mile from Macomades Minores leads L. Poinssot in the *M. Soc. Ant. Fr.*, n.s., i (1944), pp. 133-169, to review all that is known of this important African bishopric, which can now be definitely located in the place known as Borj Yonga from its ruined fortress.

MOSAIC FROM BIR-EL-KSOUR (TUNISIA).—In *BCHT*, May 1946, pp. viii-xi, Alfred Merlin describes a mosaic found in 1936. The central panel represents two hunting scenes.

MOSAIC OF ELLES.—Under the title of "Le Couronnement de Vénus," Gilbert-Ch. Picard publishes in *École Française de Rome, Mélanges d'Archéologie et d'Histoire*, lviii (1941-1946), pp. 43-108, a mosaic found at Elles in central Tunisia in 1942. The

central scene shows Venus being crowned by two lady centaurs.

INSCRIPTION FROM ARRIS. —In *REA*, xlv (1944), pp. 94–120, Jérôme Carcopino describes an inscription on limestone discovered in 1942 near Arris in Algeria. It describes the faithful service of one Masties to both Romans and Moors, dux for 67 years and imperator for 40 years.

SPAIN

PALEOLITHIC CAVE. —In *Archiv für Prehistoria und Ethnologie*, ii (1945), pp. 11–29, F. J. Cerda describes three levels of a newly discovered cave at Cova-Negra de Bellús (Jativa). Level A represents for Eastern Spain a phase which corresponds chronologically to early Aurignacian. Level B is typically Musterian with parallels in Europe and North Africa. Level C is also Musterian, but chronologically later than its European counterparts. (G.M.)

CAVE AT COCINA. —In *ibid.*, pp. 39–71, M. Vidal y Lopez relates the beginning of an excavation at Cocina (Dos Aguas), in a cave, which was inhabited from the end of the Paleolithic. (G.M.)

THE CAVE OF MARVELS. —In *ibid.*, pp. 191–202, E. P. Ballester describes La Cova de les Maravelles (Gandia), used from the Paleolithic to the Early Christian era. (G.M.)

SPANISH PALAFITTE. —In *ibid.*, pp. 93–113, J. Chocomeli describes the first exploration of a Lake-dwelling in Spain, at Ereta del Pedregal. (G.M.)

PRE-ROMAN VILLAGES. —In *ibid.*, pp. 213–237, H. Breuil and R. Lantier describe and illustrate the discovery of pre-Roman settlements of the La Tène Period on a plateau, and surrounding hills, at Minateda (Albacete). (G.M.)

A MEGALITHIC STRUCTURE. —In *ibid.*, pp. 165–190, D. F. Valls describes a megalithic structure at Monforte del Cid (Valencia). (G.M.)

EYED IDOLS. —In *ibid.*, pp. 115–141, pls. 1–v, I. B. Tormo describes 25 animal bones with eyelike incisions from Cova de la Pastora, and 2 from Ereta del Pedregal. (G.M.)

SOLAR SYMBOLS. —In *ibid.*, pp. 203–212, I. B. Tormo describes a vase from San Miguel de Liria and its decorative motives (various forms of triskelion, many-pointed stars, and swastikas), perhaps the expressions of a solar cult. (G.M.)

FRANCE

BIBLIOGRAPHY. —P. Willeumier continues his "Chronique Gallo-Romaine" in the *REA*, xlix, 3/4 (1947), pp. 286–290.

CHRONOLOGY. —In *REA*, xlv (1943), pp. 81–90, H. Rolland discusses the chronology of the lower valley of the Rhone, with special reference to the excavations at Saint-Blaise and Glanum. Using evidence

from ceramics, coins, architecture, and an inscription at Glanum, the author discovers seven datable periods between the seventh century B.C. and the seventh century of the Christian Era.

CHÂTELFERRON REEXAMINED: Upper Palaeolithic in Central France. Writing in *Archaeologia*, xcii (1947), pp. 95–119, A. D. Lacaille reviews the history of La Grotte des Fées.

Unworked objects include a considerable range of animal bones of the period, and one human skull-cap, which is studied separately by Dr. A. J. E. Cave (pp. 117–119).

TOPOGRAPHY OF CAESAR'S SECOND CAMPAIGN AGAINST THE BELLOVAZI. —Georges Mathat studies the "Problème topographique de la deuxième campagne de Jules César contre les Bellovaques" (*M. Soc. Ant. Fr.*, n.s., i, 1944, pp. 61–112).

DISCOVERIES AT SAINTES IN 1944. —In *BCH*, Dec. 1945, pp. ii–vii, A. Merlin presents M. Clouet's summary of the discoveries made in Saintes as a result of the military works constructed there in 1944. A trench dug across the valley of the amphitheater, 200 meters west of it, indicated Roman remains which would extend the boundary of the ancient city further west.

ANTIQUITIES OF VIENNE. —Recent finds in the territory of the Roman city, published by P. Wuilleumier in the *REA*, xlviii (1946), pp. 92–100, include an altar for use in the cult of Cybele, interesting for the variety of symbols which it unites, two pagan epitaphs, a mile stone of the time of Constantine; and a number of Christian inscriptions.

RESIN FACTORY AT MONTPELLIER-LE-VIEUX. —In *REA*, xlv (1943), pp. 241–252, Armand Viré discusses the use of resin in the Gallo-Roman period and his excavations at a center of resin production at Montpellier-le-Vieux on the great plateau called the Causse Noir between the Jonte and the Dourbie.

SCULPTURE. A Gallic deity. In *The Journal of the Walters Art Gallery*, x (1947), pp. 85–89, Dorothy Kent Hill restudies a Gallic bronze figurine in the Walters Collection, which has been identified as the Gallic Dispat. (S.E.F.)

THE "GOD WITH A MALLET" is a Celtic god, known in the western part of Narbonese Gaul. He is generally represented clothed, but two new representations of him on altars from Tavez and Capdeuil, show the influence of the Latin Silvanus in his rendering, in the one case partly, in the other entirely nude. (Fernand Benoit in *REA*, xlviii, 1946, pp. 267–270).

THE GOD WITH A STAG. —The religion of the Gauls is illuminated by a stele discovered in excavations at the sanctuary of Donon, a common place of worship for the tribes of the Leuci, Mediomatrici, and Tribocci in southern Gallia Belgica, and published in the *M.*

Soc. Ant. Fr., n.s., i (1944), pp. 171-191 by E. Linckenheld.

HEAD FROM ALESIA. —In *BCTH*, March 1945, pp. i-vi, J. Toutain describes a bearded, male head slightly under life size which was discovered at Alesia in 1944.

CAULDRONS OF THE LA TÈNE PERIOD FROM THE SAÔNE. —In *BCTH*, June 1946, pp. x-xiii, L. Armand-Calliat describes the various types of bronze cauldrons of the La Tène period at the Museum of Chalon.

INSCRIPTIONS. —Writing in the *REA*, xlix (1947), pp. 130-138, P. Grimal discusses two Latin inscriptions in the museum at Saintes (Santones; Mediolanum in Aquitania), of importance for local history. Unusually interesting for the funerary practices and beliefs of the Roman West in antiquity is an inscription, discovered in the basilica of Saint-Irénée at Lyons, and published in the *REA*, xlix, 1947, pp. 139-159, by W. Seston and Ch. Perrat. It is the burial of an infant girl (*quae*) *neque corde culpam acciperet neque ore dolum loqueretur*, whose mother *ponendum curavit et sub acia dedicavit a sarcophagum cum basilica et fabrica omni(s) eius*.

BELGIUM

THE NECROPOLIS OF PERONNES-LEZ-BINCHE. —In *L'Antiquité Classique*, xvi, 1 (1947), pp. 79-104, G. Faider-Feytmans publishes twenty-four objects found in a necropolis at Péronnes in 1911, with a full bibliography of Belgian ceramics.

ENGLAND

WAR AND ARCHAEOLOGY. —Writing in the *AJ*, xxviii, 1/2 (January-April, 1948), pp. 20-44, B. H. St. J. O'Neil reviews the contributions of the war to archaeology in England, both good and bad.

SURVEY METHODS. —Under the title "Linear Earthworks: Methods of Field Survey," a group of scholars headed by Sir Cyril Fox, President of the Society of Antiquaries of London, outlines the agreed methods to be used in the Society's project. (*AJ*, xxvi, 3/4, 1946, pp. 175-179).

EXCAVATIONS AT SILCHESTER, 1938/39. M. Aylwin Cotton, who explored the defenses of Silchester-Calleva Atrabatum for the Ministry of Works and Buildings just prior to the War, reports on his results in *Archaeologia*, xcii (1947), pp. 121-167. The site was unoccupied before the Roman occupation, but grew rapidly in A.D. 45-65. In this period, and perhaps at the end, in connection with Boudicca's revolt, an earthwork line of defense was thrown up, toward which the gridded street-net extended, but the area was not entirely occupied. In the Antonine period when Roman Britain was again threatened, a new line of earthworks was constructed, well within the circuit

of the earlier one. Presumably this line represented the limits of the inhabited area. In the Severan period (Period V), this earthwork was replaced by a wall with gates, two of which are preserved in part.

SAXON VILLAGE AT SUTTON COURTENAY, BERKSHIRE. A "Third Report" on this site which is being excavated by local gravel merchants under the watchful eye of the Oxford University Archaeological Society, is presented in *Archaeologia*, xcii (1947), pp. 79-93.

SANDOWN PARK, ESHER. —One of the archaeological by-products of the War was the exploration, by means of a number of pits, of a hill known as the Warren, near the Sandown Park Race Track by units of the Welch Guards. The results are reported in full by Major J. P. T. Burchell and Sheppard Frere in the *AJ*, xxvii, 1/2 (Jan.-April, 1947), pp. 24-46. Finds include flints of various sorts of the Mesolithic Period, and weapons and particularly pottery from the Early Iron Age and the Anglo-Saxon period.

THE SUTTON HOO HELMET. —In *Antiquity*, xxi (September, 1947), pp. 137-144, Herbert Maryon of the British Museum describes his reconstruction of this sixth century Vendel-type helmet.

PIERCED BRONZES. —In the *AJ*, xxvii, 1/2 (Jan.-April 1947) pp. 1-6, Sir Cyril Fox publishes "An Openwork Bronze Disc in the Ashmolean Museum," a whirling arrangement of three vine stems and leaves.

A ROMANO-BRITISH POTTERY KILN. —The engineering operations of rabbits on the farm of Mr. Westmoreland at Swanpool, near Lincoln, were responsible for the discovery of a pottery kiln of the circular updraught type, of the third and the first part of the fourth centuries. (Graham Webster and Norman Booth, *AJ*, xxvii, 1/2, Jan.-April, 1947, pp. 61-79.)

ANGLO-SAXON URNS. —The urns published in *AJ*, xvii, (1937), pp. 424-437, came not from Lincoln but from the cemetery at North Elmham in Norfolk (J. N. L. Myres, *AJ*, xxvii, 1/2, Jan.-April, 1947, pp. 47-50).

DENMARK

VILLANOVAN BRONZE HELMETS. —The chance find of peat diggers in Viksø, North Zealand, Denmark, in September 1942 brought to light the two first horned and crested helmets of Villanovan beaten-bronze technique to have been found in Scandinavia. Their publisher, H. Norling-Christensen, dates them to Montelius Period 5 or 6, i.e. to about 700 B.C., and thinks of them as of Italian manufacture. (*Acta A.*, xvii, 1-3 1946, pp. 99-115).

IRON AGE BRONZE BROOCHES. —In *Acta A.*, xvii, 1-3 (1946), pp. 126-135, Th. Ramskou discusses a number of brooches of Danish workmanship which belong to the period after A.D. 700.

THE LADBY SHIP ANCHOR.—This anchor, with its iron chain and rope cable, found with the Viking ship at Ladby in 1937, has been studied, and its employment is illustrated by drawings, by Carl V. Sølver in *Acta* 4, xvii, 1/3 (1946), pp. 118–126.

GERMANY

CARTOGRAPHY AND TOPOGRAPHY.—With the imprint date of 1940, the *Archäologische Institut des deutschen Reiches* published the *Mainz-Mogontiacum* section of its great *Tabulae Imperii Romani*.

HUNGARY

PANNONIAN POTTERY is the subject of the study of Éva v. Bónis, in *Die Kaiserzeitliche Keramik von Pannonien (ausser den Sigillaten)*, I, *Die Materialien der frühen Kaiserzeit* (Dissertationes Pannonicae ex Instituto Numismatico et Archaeologico Universitatis de Petro Pázmány Nominatae Budapestinensis Provenientes, ser. ii, no. xx.) Budapest, 1942. The introduction is followed by a discussion of different shapes—urns, pots, etc. The catalogue of pottery illustrated in the plates is given in German on pp. 59 through 242. This is followed by an inventory of finds from the graves of the cemeteries cited in the introduction. (F.F.J.)

U.S.S.R.

PALEOLITHIC AND NEOLITHIC.—In a volume edited by M. E. Foss a series of articles have appeared. V. A. Gorodtsov describes his work at Il'skaia, originally attributed to the Solutrian Period but later assigned to the late Mousterian. P. I. Boriakovskii recounts his own and previous work by P. P. Efimenko at Borshevo II and assigns this station to the Middle Magdalenian. Kirillovskaya, which Efimenko dated in the Early Magdalenian is attributed by Boriakovskii to the final phase of this period. G. P. Sosnovskii describes excavations at Srostka on the Katun River. He concludes that this was a hunting camp inhabited at the end of the Paleolithic. S. N. Bibikov reported on the excavation of a Paleolithic cave at the mouth of the Katav River in the southern Urals. O. N. Bader described late Paleolithic cave drawings at Priazov in the Melitopol region. I. T. Pidoplichka reported on a series of unique "gigantoliths" from Novgorod-Seversk, believed to be Paleolithic. The largest measured 45.4 cm. and weighed 8.25 kg. A. P. Okladnikov described a Paleolithic statuette from Buret. The ornamentation represents a tiger's skin in the opinions of Okladnikov and V. I. Gromov. S. N. Bibikov gives a detailed description of preparing *Helix* for food during Paleolithic times. M. M. Gerasimov studied the method of preparing bone tools at Malta in Siberia. M. V. Voevodskii and M. Z. Paninskii worked at

two Mesolithic stations, Gremiachaia and Borka respectively. This transition period is the least well-known in the Soviet Union. B. F. Zemliankov excavated Razliv near Leningrad. From the pottery and flint tools he ascribes this station tentatively to the late Neolithic circa 4000 B.C. Okladnikov also writes on the function of stone fish excavated in Siberia. He believes that they were used as fish bait from modern ethnographic analogies. Foss and L. Elnitzkii are concerned with the interpretation of the function of Neolithic stone implements shaped like pickaxes from Karelia. They conclude that these were quarrying tools. S. A. Simenov defines the purpose and function of a series of Neolithic implements taking into especial account the softness or hardness of the material used. Foss also attempts to determine the various uses of Paleolithic bone and horn tools, coming to the same general conclusions as Gerasimov. P. A. Dmitriev excavated the first mud huts in the eastern Urals. E. Krichevskii attempts to determine the reason for the disappearance of the Tripolje culture. (H.F.)

SARMATIAN GOLD.—In the *GBA*, xxxiii (June, 1948), pp. 321–326, Alfred Salmons continues his study of the Sarmatian gold collected by Peter the Great. Two parts of the study appeared together in *GBA*, xxxi (January–February, 1947). The present section deals with an early group of gold objects with a curious ornamental motive, a circle flanked by two roughly triangular "wings" occurring on the flanks and shoulders of animals. By comparison with other works of art, some Sarmatian from India and China, some Iranian, the two belt sets can be dated to the fifth or fourth centuries B.C. in one case, to the third to first centuries B.C. in the other. (D.K.H.)

EXPLORATION.—The Section of History and Philosophy of the Academy of Sciences met in Moscow on March 16–17, 1948.* The following reports on 1947 Expeditions were included:

S. I. Rudenko gave an account of the excavation of the Pazyryk Kurgan, one of the large kurgans in the valley of the Udagan River of the eastern Altai. In addition to a coffin-sarcophagus, were found remains of men and women and carcasses of interred horses, saddled and bridled.

V. I. Ravdonikas described the work at Staraya Ladoga where the eighth-tenth century *gorodishche* was opened. Among the 20,000 objects were modelled pottery of early Slavic types, wooden articles including cups and dippers, handles, part of a loom and children's wooden swords, replicas of tenth century

* The following Russian reports are all from Henry Field. He acknowledges assistance in translating and checking from Mrs. David Huxley and Eugene Prostor.

forms. In addition, Ravdonikas found linen and woolen fabrics, leather articles and many iron objects decorated with bronze or even gold as, for example, a secular ring of Krivichi type.

A. P. Smirnov described the studies conducted at Bulgar on the Volga. The recent work consisted of concentration on a pre-Bulgar settlement belonging to a late stage of the local *gorodishche* culture dominated by the so-called "matten-keramik."

EUROPEAN RUSSIA. — A. I. A. Briusov excavated lacustrine settlements along the Mozlon River in the Vologda region. Wooden platforms and buildings and numerous articles including flaxseed were found. These were attributed to the second millennium B.C. M. E. Foss concentrated work in Galicheskii lake basin. At Umilenie the finds were similar to those from the type locality at Galicheskii and a more accurate dating for the bronze implements and statuettes became possible; these belonged to the second half of the second millennium B.C. The settlement at Bilki was shown to be of much later date, reminiscent of monuments along the Upper Volga. A. P. Zbrueva surveyed the area beside Sisola River. A Paleolithic site and a much later settlement with graves were located. O. A. Gratova excavated Abashevian burial mounds at Chuvash. An especially interesting piece of pottery shows the relationship of the Abashi of the Volga with those of the Volga-Okla buried in the Fatiano graves.

S. N. Zamiatnin excavated a Scythian cemetery at Chastye Kurgany near Voronezh. During 1911 a large silver vase was found in tumulus No. 3. Work was continued in 1911, 1912, and 1915. The reports and objects have recently been reexamined by Zamiatnin. This cemetery was in use for about 250 years from the beginning of the fifth century B.C.

BELOUSSIA. — V. Taranovich has described the "stones of Boris," huge blocks bearing crosses and inscriptions referring in all probability to Boris Vseslavich, Prince of Polotsk who died in 1128.

UKRAINE. — T. S. Passek discovered seven round or oval Tripolje settlements near Kanev. The square houses (20.0 m.) yielded painted pottery with black or red designs. The first Bronze Age village was found in this area. Agriculture was practiced during this period (1500–1000 B.C.), which was contemporaneous with the rise of cord-ornamented pottery and the Catacomb burials beside the Lev River. B. N. Grakov resumed work near Nikopol (Nikopolis). Both banks of the Dnieper were surveyed, especially in the region of the large Scythian tumuli at Nechaeva and Orlova. At Novogorod-Seversk M. V. Voevodskii found Epipaleolithic and later cultures. Upper Paleolithic flint implements and associated fauna were found near Shatska in the Riazan district. At Kiev M. K. Karger

excavated territory around the Vidubits Monastery. He discovered the foundations of the eleventh century Cathedral of St. Michael the Archangel, and the princes' tomb within it. At Dovmontovii near Pskov S. A. Tarakanov discovered a series of levels of the fourteenth and twelfth centuries. Among these was found the foundation of the old stone church of Pskov dated 1144. At a depth of 6.0 m. was excavated the ancient Krivichi settlement.

CRIMEA. — P. N. Schultz continued work on the Scythian capital of Neapolis. In the catacombs he found a wall painting with horses, a Scythian archer, weeping women and numerous decorations. In addition, Schultz excavated a series of Scythian sites and a chain of fortresses along the Salghir and the Alma rivers, as well as a round fortress at Au-Dagh. Among the antiquities of Tavriak the cave sites and graves near the Chuchelska Pass were studied. V. D. Blavatskii studied the Kerch monuments. The areas of concentration were on the eastern and northern slopes of Mount Mitridat and the acropolis at Panticapeum. The date of the foundation of the city was much earlier than previously estimated.

L. Elnitskii described the finding of Roman pottery during excavations at Phanagoria in 1937. The fragments show a divinity which has characteristics and features (including the Phrygian cap) belonging to the oriental culture of the Dionysian cycle. Elnitskii likens it to representations of Sabazius.

B. Latychev attributed the votive inscriptions used by the religious bodies of Panticapeum, Gorgippia and Tanais to Sabazius. After him, Rostovtseff, recognized paintings on the walls of various tombs in Kerch as showing ritual and symbols of the mystical cult of Sabazius. Both of these theories can be discounted since the same epithets have been found after the names of other divinities worshipped during the later Roman era. It appears, however, that there is a definite proof of the penetration of Dionysian-Sabazian rituals from the north of the Aegean through to the Bosphorus and along the northern shore. It is known that relics of a cult to the "Thracian horseman" are found in abundance throughout the Scythian areas, particularly at Olbia, Ai-Todor (Charax) and in the Bosphorus. The "Thracian horseman" recently found during excavations at Thasos, in the sanctuary of Dionysus, is none other than Dionysus-Sabazius.

BOSPHORUS AND CHERSONESUS. — In a volume edited by Academician S. A. Zhebelev and V. F. Gaidukevich the material is divided into two parts: (a) the Bosphorus including discoveries at Dia-Tiritaka and its necropolis from 1932–1934 and at Myrimikia up to 1934; and (b) excavations at Chersonesus from 1931–1933 including L. N. Belvoii-Kud's study of the coins.

U. U. Marta describes the architectural complex at Tiritaka with part of the fortified walls of the Hellenistic period and remains of three castles. At the inner side of the city right at the walls is a wide complex of fish-salting baths. This complex belongs to the Roman period from the first century to the third-fourth centuries. Remains of masonry and pavement were discovered. Among the most important were a building dating from the end of the sixth to the beginning of the seventh centuries, buildings of late Roman times with fish-salting and distilling cisterns which were used as late as the early Middle Ages (eighth century). Among significant finds in this section were two Scythian statues of a man and woman. According to P. N. Schultz these belong to the Kimmerinskian period. Simultaneously with the excavation of the *gorodishche* from 1933-1934 was the excavation of the necropolis, the reports of which by V. D. Blavatskii (1933) and M. M. Kobilina (1934) are published. The usual type of grave was in an earthen tomb composed of one or two chambers. V. F. Gaidukevich identifies Tiritaka with the ancient site of Kamish-Burun and assumes that Dia was called Tiritaka in early Roman times.

The work of excavation at Myrimikia began two years later than at Kamish-Burun. During the first year's work, a small excavation was carried out with the purpose of clarifying the stratigraphy of the cultural layers, while a larger excavation disclosed a wine-press of Greco-Roman times; this is the only large complex of this type on the Bosphorus.

A study of the pottery, examined in connection with samples from Kerch, enabled E. M. Pridik to draw certain conclusions about the connections between the various groups. For example, in the first place is a group of Sinopian, then Rhodian and Faselian amphorae, and also Heracleian; at the last place Knidian marks, and at several other centers, single marks were found. In the summary the marks are divided into groups and their dates are given.

In the second part of the publication is the report by G. V. Belov about excavations in the northern region of Chersonesus from 1931-1933. The numismatic materials have been examined by L. N. Belovii-Kud.

CAUCASUS.—A. Artamonov demonstrates the importance of the old defensive works at Derbent in Daghestan. The grandiose fortifications which are still standing formed part of a strong fortress which denied access along the shore of the Caspian. These fortifications were not confined to the city, but were linked to a vast system of defense-works which ran inland from Derbent as far as Kara-Syrt, and which were known by the name of Daghhara—a mountainous wall intended to prevent the outflanking of the

city from the west, through the accessible valleys of the Ulu-chai.

Basing himself on Pehlevian mural inscriptions described by I. Pakhomov, and on the history of Derbent, and those structures extant at the beginning of the Middle Ages, Artamonov agrees with Pakhomov that the Derbent wall was completed in A.D. 567, or in the thirty-seventh year of the reign of Chosroes I. Important defense works were built during the period of Arab domination. No further extensive construction was undertaken until the ninth century when the fortress of Derbent developed into the center of a feudal organization having its own hereditary dynasty. Work was certainly continued up to the twelfth century, the zenith of Derbent's prosperity, and isolated work was carried out during the fourteenth and sixteenth centuries.

In conclusion, Artamonov gives a short description of the huge mosque-cathedral of Derbent; from its plan and from the method of its construction he considers that it was originally a Christian basilica dating from the early Middle Ages.

VOLGA.—A large number of Sarmatian monuments have been found in the Lower Volga region, but few have been described. Sinicyn described some found during excavations made in 1927 by P. Rau and carried out in several parts of the Lower Volga region.

Of the tombs explored in this area since 1927, forty-eight belonged to the Sarmatian era. These can be subdivided into three groups, according to structure, ritual and furnishings:

- (a) Tombs of the Hellenic era (third-first centuries B.C.).
- (b) Roman tombs (first-second centuries).
- (c) Late Roman tombs (third-fourth centuries).

The distinctive characteristics of the first group are: chambered, with a rectangular entrance passage, covered with poles or small boughs; the dead are in coffins, usually with the head to the south. A typical characteristic is food placed in the tomb. The most usual furnishing is clay pots of various types with circular bases; also trihedral arrows with shafts and single-bladed short knives. This group bears a close similarity to the sepulchers of the Ural-Orenburg steppes.

The second group is similar to the first in its funeral ritual and to a certain extent in the grave furniture. It is distinguished by the presence of a new type of sword with a right-hand guard and poignard ending in a ring. Pottery included rough pots with flat bases and smooth vases more finely formed; small alabaster vases are also typical. Among the most interesting articles found in this group were a Chinese mirror and a bone comb-top with small horse heads,

which is genetically linked with later reproductions of this design found in Mordovian cemeteries of the twelfth-thirteenth centuries. The tombs of this group are similar to those found in the Kama and sub-Ural regions.

The third group is distinctly different to the above. These sepulchers are narrow tombs of the "podboiny" type (ditch with lateral niche), usually facing north, although occasionally south. The furnishing conforms to a set pattern: small auricled mirrors, varied assortments of beads and clasps, and small vase-caskets in slate, usually cubic.

KAMA REGION AND URALS.—A. V. Shbrueva summarizes a volume edited by P. N. Tremiakov and published by the Academy of Sciences. The regions are divided into:

1. The peat-moss region of the mid-Urals, where the Shigirskian culture was developed and where are monuments unknown in other regions of the Urals.

2. The forest region of the Upper Kama, where a large group of late Neolithic monuments were discovered and where at the beginning of our era were concentrated the ancient sacrificial places. There too a large amount of eastern silver was discovered, dating from the tenth-twelfth centuries. This region was inhabited by numerous and rich tribes, which M. V. Talitskii identified as the "Vis" tribe of Arab origin with the ancestors of the contemporary Komiper-miaks.

3. The wooded region of the Central and Lower Kama, Viatka and parts of White Russia, where in the early Iron Age (1000 B.C.—beginning of our era) the Ananino and Pianoborsk cultures with their fortified settlements (*gorodishches*) and rich tombs were widely developed.

4. Finally, the steppe region of the Urals, where monuments from the end of the Bronze Age were discovered including Andronovo tombs and late Scythian and Sarmatian tumuli.

SIBERIA.—A. P. Okladnikov describes a new "Scythian" find on the upper Lena River. During 1936 A.M. Indrikson found a small cast bronze buckle in a small mound located on the left bank of the river Manzurka, one mile from Polozkovo. During ploughing, bridle parts, shaman's accouterments, and arrow-heads as well as bronze weapons and nephrite axes were unearthed. The buckle (9.0 x 5.7 cm.), which was found by the plough, is openwork and is covered with a dark green patina. On the front there is depicted a struggle between two animals, one being a mountain goat, attested by the turned-back, wide and smooth horns, the legs with hoofed feet, the general lines of the body, the face with the sharply expressed lower jaw and the massive lips of a herbivorous animal and also by the narrow, twisted beard. The only thing that is

not understandable is the presence of a rather long tail. Above, on the horns supplementary heads of a procession of animals, probably goats, are represented. They have the massive face with the slightly up-turned upper lip, a high brow and long ears. The body of the goat is sigmoid with one widely distended hind leg and hoof touching the horns, the other the shoulder-blade.

The second animal is a beast of prey with a large feline head on which round ears are clearly distinguishable. The nostrils and long narrow eyes are like almond-shaped gashes. The upper lip is protruding and thick. The lower lip is designated less clearly than the upper, but the sharp, massive tusk of the closed mouth is clearly visible. Claws are depicted on the powerful forepaws clutching the goat. The tail of the animal is long and rounded in the form of a hook. The beast of prey is represented in the same position as his victim with his body turned in the middle. This expressive pose well represents the strain of the animals interwoven in their death grip. The constriction of the beast of prey's eyes, his bared jaw and his pressed back ears strengthen this impression.

In general composition the buckle carries several unusual correlations. The beast of prey falls on him from the front and seizes the goat only with his claws. The latter hits the tiger on the mouth and body with its hoofs as is clear from the position of the goat's legs. Before us is a duel of its own kind and not a simple scene of a tiger hunting a goat.

The reverse side is furnished with two oval-headed pins. The realistic vitality of form of the animals portrayed on the buckle in combination with their pure decorative stylization leaves no doubt that this creation belongs to the group of artistic monuments of the steppe tribes of Siberia and Mongolia of the Scytho-Sarmatian period. It is a parallel to the golden buckle in the Metropolitan Museum published by M. I. Rostovtsev, with a portrayal of two tigers in heraldic pose killing two mountain goats.

A comparison of these two works of art makes it possible to come closer to their dating. The animal style, vital and strong, is close to that of the Pazyryk herdsman of the Altai. This is made more important by the fact that at the Pazyryk kurgan, among the decorated horse-trappings, twin representations of carved deer were found, also identical, like the golden buckle in the Metropolitan. There are also identical figures of cocks stuck onto the Pazyryk sarcophagus. The Metropolitan buckle, therefore, can possibly be ascribed to the same period as the Pazyryk finds. The dating of the Manzurka buckle is more complicated. In spite of its community of style and similarity of minutest details with the golden buckle, it is somewhat simpler, indeed more primitive. But this can scarcely

demonstrate its chronological disparity: the better finishing of the golden buckle depends chiefly upon its material; this was an expensive article and it was made with especial care. The Manzurka buckle, furthermore, has still another and a very essential peculiarity; instead of bolster-like or raised-rim protuberances on the goat's horns, here are supplementary goat heads.

The Manzurka buckle is somewhat later than the example in the Metropolitan, but it is uncertain that the objects are very far apart in time. The new "Scythian" find on the Upper Lena thus recalls that many tribes of the taiga have long been in constant inter-relationship with the neighboring steppe tribes.

G. Sosnovskii described archeological work carried out during 1928-1929 in the Selenga Valley, Buryat Mongolian ASSR. Near Ust-Kyakhta, excavations were made in the ancient cemetery of Ilmovaya Pad. In the eastern part of the cemetery were three tombs of sloped stone; near them was a fourth tumulus. Other tombs in gravel and earth are interesting in their resemblance to those at Noin-Ula. The objects commonly found in the tombs were of bone or slate. Of particular interest were the Chinese articles, which makes it possible to assign a date to the cemetery. These articles included remains of lacquer cups and fragments of cloth, a fragment of a carved white jade blade and a Chinese mirror. Also of interest were a small carving of a bird and two gilt bronze figurines of horses. Weapons were represented by pieces of bone bow ornaments and iron arrowheads. Two types of clay vases were found: roughly baked pots and more carefully fashioned pots of pure clay.

The excavations at Ilmovaya Pad have established the fact that the early inhabitants of the district were engaged in stock-raising, and the wooden frame structures indicate those inhabitants were comparatively settled. The cemetery at Noin-Ula has been attributed to the Huns, and there is strong evidence that cemeteries having frame tombs, such as that at Ilmovaya Pad, are also of Hun origin, and date from the first century of our era.

The Saian-Altai expedition under the leadership of L. A. Evtiukhovii and S. V. Kiselev continued excavation of a palace of Chinese architecture discovered near Abakan, which dates back to the period of the residence of the Hun deputies "in the Khalzas region," in the first century B.C.

ALTAL.—Near Biisk there are many kurgans, *gorodishches*, and camp-sites. S. M. Sergeev's preliminary survey in 1929-1930 has revealed a series of cultures ranging from the Bronze Age (Andronovo and Afanasiev) to the late Iron Age. The kurgan open by Sergeev yielded at a depth of 1.75 m. human bones, a sacral vertebra of a sheep, and a horse's skull and

forelegs. Nearby were two bone bridle checks with griffin's heads carved at each end and tubular bones forming part of the bridles. Close to the human skull was found a button-like truncated cone with a transverse opening in the center and with dotted ornamentation, probably a real button, since fur cloaks are fastened today by one button at the top among the Turko-Mongolian tribes.

In addition to the objects described above were unearthed three bone tubes bearing transverse furrows forming rings. Two tubes have been fashioned like the head of a wild boar. A pendent, apparently made from a boar's tusk, was engraved with the head of a stylized griffin.

Bone *psalii* are known in the Altai from a burial near Srostka dating from the beginning of the Iron Age. Especially striking are the wooden *psalii* ornamented with animal heads and covered with gold found in the princes' tombs on the Ursul River and at Pazryk.

Sergeev suggests that his finds probably belong to the second or first centuries before our era.

YAKUT A.S.S.R.—N. N. Gribanovskii describes the rock drawings which represents animals, hunting scenes, and domestic life. These are found on the Lena River system, including the Olekma, the Chara, the Tolko, the Maya, and Nyuya, the Aldan, and the Markho, and near the river-stops of Bestya and Titara. In the northern regions the drawings are cut into the rocks, but in the south they are in red paint.

NORTH AMERICA

BIBLIOGRAPHY.—The Eastern States Archaeological Federation has published (Yale Peabody Museum, New Haven, Connecticut, 1947) *Research Publication No. 1, An Anthropological Bibliography of the Eastern Seaboard*, edited by Irving Rouse and John M. Goggin.

PETROGLYPHS OF NEW MEXICO.—Miss Agnes C. Sims illustrates and discusses these varied and interesting monuments in *El Palacio*, lv, 10 (1948), pp. 302-309.

HOUSE SITE OF THE PINTO BASIN PEOPLE.—The discovery of a house site of these early people at Little Lake, California, is announced by M. R. Harrington in *The Masterkey*, xxii, 5 (September, 1948), pp. 148-152.

CENTRAL AMERICA

ZACULEU.—The director of excavations at this north-western Guatemala site, John M. Dimick, describes his project of study and restoration in *El Palacio*, lv, 7 (July, 1948), pp. 201-209.

MEXICAN ARCHAEOLOGY.—*Mexico Prehispanico, Culturas, Deidades y Monumentos*, (Mexico, 1946),

edited by Emma Hurtado, is a large collection of short articles by Mexican anthropologists and historians which in part originally appeared in the small bilingual tourist guide entitled *Este Semana—This Week*. (G. F. E.)

VALLEY OF MEXICO.—*Mapas Antiguas del Valle de Mexico*, by Ola Apenes, Universidad Nacional Autonoma de Mexico, Mexico, 1947, is an annotated album of all of the important known maps of the settlements and hydrography of the Valley of Mexico from the time of the Spanish Conquest to the present. (G. F. E.)

HIGHLAND GUATEMALA.—*Excavations at Zacualpa*, Guatemala, by Robert Wauchope (Publication no. 14 of the Middle American Research Institute, the Tulane University of Louisiana, 1948), is a full-sized monographic report on the site of Zacualpa in the Department of Quiché.

BONAMPAK MURALS.—In *El Palacio*, lv, 4 (April, 1948), pp. 99-102, Sylvanus G. Morley writes on "The Greatest Murals of Ancient America," those found in 1946 at Bonampak in Chiapas, Mexico. He illustrates the workmanship with one scene, that of a reclining, wounded, warrior.

FLOOR BASINS AT ZACUALPA (GUATEMALA).—In *El Palacio*, iv, 5 (May, 1948), pp. 135-137, Robert Wauchope discusses the similarity between baked clay platforms with basins built into them in Arizona and similar constructions in Guatemala.

CRUCEROS FROM YALALAG.—In *El Palacio*, lv, 5 (May, 1948), pp. 131-134, David L. Neumann describes several cruceros from the pueblo of Yalalag in Oaxaca made of beads of pomegranate form. They date from the late eighteenth and early nineteenth centuries, but preserve forms which were wide spread at an earlier time and may have influenced the Navajo "squash blossom" design.

MAYA POTTERY.—Writing in *The Masterkey*, xxii, 4 (July, 1948), pp. 131-134, George W. Brainerd discusses a collection of pottery from Guatemala in the Southwest Museum, and inclines to an early date prior to the Tzakol period (A.D. 300-600).

MEXICAN CLAY STAMPS.—Jorge Enciso in *Sellos del Antiguo Mexico*, Mexico D. F., 1947 provides a valuable collection of the designs from the small clay stamps of Mexico. (G. F. E.)

MONTE ALBAN.—Alfonso Caso's *Calendario y Escritura de las Antiguas Culturas de Monte Alban*, in vol. i of the *Obras Completas* de Miguel Orthón de Mendizábel, Mexico, 1947, is a welcome addition to the same author's more general survey of the hieroglyphic writing of the Oaxaca region, *Las Estelas Zapotecas*. The present study is limited to the inscriptions of Periods I and II of Monte Alban, the earliest phases known in that area and supposedly of the Archaic or Middle Culture Horizon. (G. F. E.)

SOUTH AMERICA

BRAZIL. ARCHAEOLOGICAL COLLECTIONS FROM MARAJÓ.—In the *Year Book of the American Philological Society*, 1947, pp. 203-206, H. C. Palmatary offers a preliminary report on her analysis of archaeological collections from the Island of Marajó, at the mouth of the Amazon River. Miss Palmatary has classified the pottery in the collections into eight major divisions including some sixty "wares" (types). Stratigraphic information is not available, in spite of the extensive excavations that have been made. Miss Palmatary makes an attempt to divide her types chronologically on the basis of design association on individual specimens.

There appear to be further differences between remains reported from neighboring islands and the adjoining mainland regions, and the collections from Marajó proper, indicating considerable cultural complexity in the area. (J. H. R.)

COLOMBIA. SURVEY IN WESTERN SANTANDER.—In *Universidad de Antioquia*, Medellín, 21: 83, 1947, 419-454, Graciliano Arcila V. reports the results of a rapid survey in the area of La Paz and the Upper Opón, Department of Santander, Colombia, made in 1942. In the La Paz region, three tombs were opened and three badly looted caves visited. Some tombs were excavated at Cachipay in the Upper Opón, and collections from other sites examined. The pottery is cruder than in the La Paz area, and less decorated. (J. H. R.)

COLOMBIAN GOLDWORK.—In the *Revista del Instituto Etnológico Nacional*, Bogotá, ii, 2, 1946, (1948), pp. 60-71, Jaime Jaramillo A. illustrates and discusses two small gold figures of Chibcha workmanship in his private collection and a superb Quimbaya gold mask in the British Museum. The Chibcha figures are of the style called "tunjos": flat plates of gold with surface relief in gold wire, a technique which provides for highly stylized representations. (J. H. R.)

COLOMBIA. SAN AGUSTIN CEMETERY AT QUINCHANA.—In *ibid.*, pp. 5-41, Luis Duque G. presents a more complete report on the 1946 excavations at the San Agustín type cemetery at Quinchana on the upper Magdalena River, of which a shorter and more popular summary appeared some months previously (*Revista de las Indias*, n.s., no. 96, 1947). The new report is apparently intended to be the final one on this work. The areas excavated and the tombs found appear clearly on an excellent plan (no. 3). Some thirty graves were dug, mostly rectangular stone-lined cists with the body extended on the back, head to the north. There is also one oval cist, four earth pits, and a secondary urn burial, and one of the bodies in an earth pit was in a sitting position with the knees drawn up. Grave goods were scarce. (J. H. R.)

ECUADOR. MOLDS AND STAMPS FROM LA TOLITA.

—In the *Boletín de Informaciones Científicas Nacionales*, Quito, i, 4 (1947), pp. 3-16 (11 figures), Julio Arauz describes six figurine molds, six stamp seals, two roller stamps, and eleven engraved beads or spindle whorls from the famous site of La Tolita, Province of Esmeraldas. (J. H. R.)

PERUVIAN BIBLIOGRAPHY. —In *Fenix*, 5, Lima, 1947, pp. 200-282, Hans Horkheimer publishes an annotated bibliography of over 360 titles chosen as important for the study of Peruvian archaeology. (J. H. R.)

PERU. PLANT IDENTIFICATION ON EARLY NAZCA EMBROIDERIES. —In the *Southwestern Journal of Anthropology*, iii, 4 (1947), pp. 294-321 (1 plate), the late Lila M. O'Neale describes a magnificent embroidered tunic of the Early Nazca period from the Peruvian coast. The decoration on this tunic consists of twenty-six stylized human figures, each holding a food plant in each hand and facing front. The plants are sufficiently well represented to suggest the possibility of identification. This attempt is made by Thomas W. Whitaker in the second part of the article under consideration (pp. 311-321). He recognizes ten species: manioc, kidney bean, lima bean, peanut, chili pepper, maize, lucuma, jiquima, yacon, and guava. These are all low-altitude plants and were probably cultivated by the Early Nazca people. Actual remains of all of them except lucuma, yacon, and guava have been found in Early Nazca sites. (J. H. R.)

PERU. PREHISTORIC MINES. —A survey of prehistoric mines of metal ores in Peru is given by Alberto Regal, "Las Minas Incaicas," *Rev. Unio. Católica Perú*, xiv, 1 (1946), pp. 43-85. (G. R. W.)

ARGENTINA. THE DIAGUITA AREA. —An exhaustive treatment of the Diaguita area and its archaeol-

ogy from a descriptive standpoint is given by Fernando Márquez Miranda, in *Los Diaguitas, Inventario Patrimonial Arqueológico y Paleo-etnográfico* (La Plata, Univ. Nacional, Inst. del Museo, 1946; 300 pp., illustrations). (G. R. W.)

ARGENTINA. THE NORTHWEST. —The *Yale University Publications in Anthropology*, no. 38 (1948; 158 pp., illustrated), "Northwest Argentine Archaeology," by Wendell C. Bennett, Everett F. Beiler, and Frank H. Sommer, is a heroic and apparently successful attempt to inject chronological meaning into the rich archaeology of the northwest Argentine. The region is divided into four sub-areas: the North, the Center, the South, and the East. An early horizon, possibly roughly contemporaneous with the early periods of Peruvian archaeology, is defined for all but the North sub-area. This Early Period in northwest Argentina is characterized by plain or simple wares, some incised pottery, and the presence of large urns. The famous Barreales ware is placed in the Early Period bracket. The Middle horizon is characterized by the classic Calchaqui pottery and the Belén styles. This is succeeded by a Late Period which gives way to the Incaic-influenced final period. Inca stylistic influence in northwest Argentine pottery is seen to be fairly strong on this level. (G. R. W.)

ARGENTINA. LOWLAND ARCHAEOLOGY. —Two papers entitled "Lowland Argentine Archaeology" (*Yale University Publications in Anthropology*, no. 39, 1948; 40 pp., illustrated), one on the little-known archaeology of the lower Paraná River and the other on the even less-known Pampean area, are attempts to systematize the archaeology of these regions by classifying cultural units or complexes into groups of varying degrees of relationship. (G. R. W.)

BOOK REVIEWS

DOROTHY HANNAH COX, *Editor*

THE CULTURES OF PREHISTORIC EGYPT, by *Elise J. Baumgartel*. Folio, pp. xi+122, figs. 50, pls. 13. Published on behalf of the Griffith Institute by Oxford University Press, 1947. £2. 2s.

In recent years most of the detailed studies on Egyptian prehistory have appeared in German and Dr. Baumgartel's book is thus a most welcome arrival. It is an important contribution to the subject; in addition to the results of recent excavations, the author has also been able to utilize the original material discovered by Petrie and his collaborators at Naqadah, Ballas, Hu, Abadiyah, and Koptos. A great part of the antiquities from these sites are preserved in the University College collection of which Dr. Baumgartel has been preparing a complete catalogue. Since she has been reconstituting as many tomb groups as possible, objects in the Ashmolean and Berlin Museums are also included in her catalogue, which it has not yet been feasible to publish. The present book contains the discussion of the problems which arose during the course of this work and photographs of a number of objects either unpublished or known only from drawings.

The first section reviews the predynastic cultures on the basis of evidence found in Egypt itself. In order to elucidate the problems involved, we insert here a chart summarizing the development of predynastic culture as it appears to us. A continuous Upper Egyptian development through the phases Tasian, Badarian, Amratian, and Gerzean is likely. In northern Lower Egypt we have only scattered sample excavations which do not yet permit the differentiation of definite cultural periods.

LOWER EGYPT		MIDDLE AND UPPER EGYPT	
The First Dynasty			
Maadi	Gerzean = Naḳāda II		Predynastic Periods
Merimde	Amratian = Naḳāda I		
	Fayum A	Badarian	
	↑	Tasian	
range uncertain	↓		

Dr. Baumgartel opens by rejecting all theories that the Delta played a leading role in predynastic Egypt, including Sethe's reconstruction of a Heliopolitan

kingdom and Scharff's proposal that Gerzean existed in the north earlier than in the south, and that its appearance in the south marks the predynastic unification of Egypt postulated by Sethe. The chief points in her discussion may be summarized as follows. The absence of early cultural remains from the Delta should not be explained away by assuming that such remains exist but are deeply buried. On the contrary, the Delta was probably still an uninhabitable swamp at the time that the early Chalcolithic settlements of Upper Egypt were established. The work of the geographer, Siegfried Passarge, who reaches a contrary conclusion and supports Sethe ("Die Urlandschaft Aegyptens und die Lokalisierung der Wiege der alt-ägyptischen Kultur," *Notae Acta Leopoldina: Abhandlungen der kaiserlich Leopoldinisch-carolinisch deutschen Akademie der Naturforscher*, n.s., ix, 1940, pp. 75-152), is not taken into account, but this omission must be attributed to the disruption of the war years. Dr. Baumgartel indicates that Sethe's claims for Osiris as a historical king of Heliopolis are weak, that 4240 B.C. has been disproved as the date for the introduction of the Sothic calendar, an achievement attributed by Sethe to prehistoric Heliopolis, and, finally that there is no archaeological evidence for the existence of Heliopolis before the Third Dynasty. She rejects Newberry's claim that the ensigns on decorated pottery are nome standards and that the majority of them refer to Delta nomes. Next, she gives her reasons for regarding the possible representatives of an early Northern Egyptian culture, Fayum A and Merimde, as backward settlements contemporary respectively with Amratian and Gerzean.

Dr. Baumgartel's repudiation of the "Delta Hypothesis" is a significant conclusion. Together with recent publications by Schott (*Bericht über den VI. internationalen Kongress für Archäologie, Berlin, 21.-26. August, 1939*, pp. 266-270) and Frankfort (*Kingship and the Gods*, pp. 349, n. 6; 350, n. 15), it marks a trend which is dethroning the long-prevailing hypothesis of Sethe. However, in her attack upon the concept of a Delta kingdom which unified prehistoric Egypt, she tends to underestimate the importance of the Lower Egyptian cultures and their independence of the Upper Egyptian tradition. Throughout her discussion of the chronological position of Fayum A and Merimde, Dr. Baumgartel assumes that they were peripheral to Upper Egypt and that cultural features could not have appeared in the north earlier than in the south. Her equation of Merimde with Gerzean is based upon a number of diagnostic features: the Mer-

imide flints include a "fair admixture" of blades, which is, she says, in contrast to the almost pure "core" industry of Amratian, but comparable to the Gerzean material; Merimde possesses excellently worked flints, ground before retouching; this is a technique known in Amratian, but perfected in Gerzean. An exceptional winged spear-head from Merimde was made, she believes, in the same workshop as a leaf-shaped Naqadah spear-head dated to S.D. 55. She compares the pear-shaped maces of Merimde with those of Gerzean and the incised pottery with that from Upper Egypt belonging to S.D. 40 or later. In addition, she cites rare Merimde vessels having rims with lips as features that could not be early.

These factors, however, do not provide convincing evidence for the date of Merimde. The two ceramic aspects cited are generalized features; there are no detailed correspondences between the incised sherds from Merimde and incised pottery from other sites. Dr. Baumgartel's treatment of the evidence derived from flints merits a detailed consideration by a specialist in that field. Here, we may note only that a discussion with Linda S. Braidwood brought out the following points. The similarities between the flint industries of Fayum A, Merimde, and Badarian are sufficient to suggest that these three cultures should not be separated too far from one another. In addition to Merimde, plain blades occur occasionally in Fayum A and with greater frequency in Badarian. As far as Amratian is concerned, the small number of plain blades known may be due to the scantiness of the evidence and the apparent absence at that time of the easily recognized plain blade types of Gerzean. Dr. Baumgartel's use of the term "core industry" for bifacially worked flints, whether made on blades or flakes, is incorrect and misleading.

Accordingly, the Merimde-Gerzean synchronism remains unproven. In fact, certain ceramic evidence suggests that Merimde was in part contemporary with Amratian (both have red-polished bowls standing on human feet, bowls with hollow feet, vessels with thumb-holds, and possibly comparable carinated bowls). On the other hand, Caton-Thompson has indicated a good deal of evidence correlating Merimde and Fayum A with Tasian (*The Desert Fayum*, pp. 90-94). Future discussion of the position of Merimde will have to take into consideration the three distinct levels revealed during the seventh season of excavation (*Chronique d'Égypte*, xx, 1945, pp. 74 f.). It appears, for example, that the herring-bone incision was characteristic for the earliest level and died out in the middle one.

After the discussion of the "Delta Hypothesis," Dr. Baumgartel demonstrates the existence of a gap between the Palaeolithic and Chalcolithic cultures of Egypt and concludes that the bearers of the earliest

Chalcolithic cultures must have entered from the south. There follows a description of salient features of Tasian, Badarian, Amratian (which Dr. Baumgartel follows Scharff in terming Naqāda I), and Gerzean (Naqāda II). Like Scharff, Dr. Baumgartel includes Petrie's Semamean period (i.e. Late Predynastic, S.D. 60-75) within Gerzean (cf. *JNES*, iii, 1944, pp. 110; f. 135 f.). In consonance with her views as to their peripheral character, she does not devote separate sections to the Lower Egyptian sites, but discusses them only as they enter into the argument. Maadi is cited under Naqāda II, but its characteristics are not described nor is there any indication that it represents a culture distinct from Gerzean. In this connection, the discoveries at Turah (Junker, "Bericht über die Grabungen . . . auf dem Friedhof in Turah," *Denkschriften der k. Akademie der Wissenschaften in Wien*, phil.-hist. Kl., lvi, i, 1912, p. 2, fig. 1), the Gizeh tramway (von Bissing, *Tongefässe* [CatCaire], pl. iv, 3352) and particularly at Al Omari (*Chronique d'Égypte*, xxi, 1946, pp. 50-54) are worthy of mention as additional evidence that northern Lower Egypt possessed a distinctive cultural tradition.

One of the most revolutionary points emerging from the discussion in the first section is the necessity for serious reconsideration of the sequence dating system. Dr. Baumgartel indicates that the three earliest wavy-handled vessels in Petrie's *Corpus of Prehistoric Pottery* are in reality not well-dated; she is, therefore, convinced that all wavy-handled types, except for those of the First Dynasty, occurred simultaneously. She states that W 1 (fig. 1) is bought and possesses no grave group. W 1G, dated in the corpus to S.D. 58(?) was found in grave b 244 at Amrah with pottery having a range of S.D. 58-62. Petrie's date for W 1T, S.D. 43, is based on this vessel's squat shape only, as the other pots from grave a 6 at Amrah possess a range of S.D. 44-63. To these statements we can add that the Oriental Institute possesses a wavy-handled pot, no. 5816, which corresponds more closely to W 14 (S.D. 46-58) than to any other corpus type. The vessel was found at Amrah in grave b 202, which is described by Randall-MacIver, presumably by an incomplete list of contents (*El Amrah and Abydos*, p. 17), and is assigned by Petrie to S.D. 31-38 (*Prehistoric Egypt*, pl. 14). This pot, of comparatively advanced form, apparently possesses an Amratian range. This is unaccountable, for, despite Petrie's reference to wavy-handled vessels appearing in a S.D. 35-42 range (*Diospolis Parva*, p. 5 and pl. II), published examples do not appear before S.D. 40, except for pots found at Armant (Mond and Myers, *Cemeteries of Armant*, i, pl. xxiv, W 49b1) and Mostagedda (Brunton, *Mostagedda*, pl. xxx, 1673) in graves uncertainly assigned to S.D. 39-41 and 39-79.

The evolution of the wavy-handled vessels was such

a basic assumption in the construction of the sequence dating system that any question as to the validity of the one necessarily entails uncertainty as to the validity of the other. Although the general relationship of Amratian and Gerzean, now established independently of grave materials by Caton-Thompson's dig at Hemamieh Settlement (Brunton and Caton-Thompson, *The Badarian Civilization*, pp. 69-79), is not affected, we cannot be certain of relative dating within the periods or assign many individual objects to one or the other before a reconsideration of the evidence on which the sequence dating is based—Petrie's original nine hundred tomb groups. Until this can be done, or until the system is checked by new excavations, we may have to continue using it, but the precise "dates" should not be allowed to suggest a false sense of knowledge and exactitude. For example, Dr. Baumgartel believes that the wavy-handled pots were not introduced into Egypt until the S.D. 45-50 range. This conclusion, however, can have little meaning after she has challenged Petrie's basic premise as to the wavy-handled class, for, according to his method, the graves of early Gerzean were recognized by the presence of either "early" wavy-handled forms or pottery associated with such wavy-handled vessels in other graves. Until the question of sequence dating is settled both the ranges assigned to objects and many outstanding problems of Egyptian prehistory must be discussed with great reservation.

The first section also contains observations on important categories of objects. Dr. Baumgartel reiterates Brunton's view that the range assigned by Petrie to the cross-lined ware must be extended. The spherical or oval basalt vases with a small conical foot have been treated as typical for Amratian, but she shows that examples are common in Gerzean. However, we cannot accept the claim that they are characteristic only of Gerzean. If we survey dated examples, we can find eleven from Amratian, six from S.D. 38 or transitional ranges, and sixteen from Gerzean; moreover, the rare type with spherical body seems to occur only in Amratian. To the discussion of stone and copper axes on p. 42 can be added the Gerzean copper axe weighing over three pounds found by Brunton at Matmar (*Nature*, cxxx, 1932, pp. 625-626, figs. 1-6).^{*} Dr. Baumgartel assumes that stone vessels from Knossos and figures of bearded men from Early Minoan II deposits in the Messara were introduced into Crete during Gerzean. The existence of direct connections between the two countries at this time is, however, questionable. The stone vessels could

have been imported into Crete at a later date (Pendlebury, *Archaeology of Crete*, p. 54). The direct dependence of the Messara figures on Egypt has been denied (L. Banti cited by Pendlebury, *op. cit.*, p. 74) and Early Minoan II could not possibly have been contemporary with Gerzean.

The second part of the book contains a courageous attempt to explain developments in Egypt by comparisons with Asiatic materials. Dr. Baumgartel visualizes a simple pattern for the prehistory of Mesopotamia and Iran. An early group of cultures with painted pottery was separated by an intermediary phase having plain and incised wares (the Uruk period or, according to the revised terminology introduced by Delougaz in *Presargonic Temples in the Diyala Region*, the Warka and Proto-literate a and b periods) from a later painted pottery period (Jamdat Nasr or Proto-literate c and d). Egypt was dependent upon this area and repeated the same pattern with some cultural lag. Thus, the first painted pottery of Egypt, the crosslined, "is an offspring of the first painted pottery of Iran." Gerzean was introduced into Egypt by Asiatics who had had intermittent trade relations with Amratian. These invaders "had been influenced by the incised pottery culture corresponding to that of the so-called Uruk period" and their movements were connected with the migrations that produced the Jamdat Nasr period in Mesopotamia. From the Uruk culture they brought into Egypt jars with triangular lugs or with spouts, vessels with loop-handles, "bell pots" (i.e. rough bowls equivalent to the so-called votive bowls of Mesopotamia), incised and impressed pottery, and the stone jars with a conical foot. From the Jamdat Nasr assemblage they brought the second class of painted pottery, the decorated ware. Dr. Baumgartel speculates upon the possibility that there existed between Amratian and Gerzean an intermediate stage marked by incised pottery; this would complete the analogy between the Mesopotamian-Iranian area and Egypt.

These conclusions are based on comparisons that go far beyond any hitherto proposed. In fact many of the features compared are resemblances too generalized to be connected. As examples, we may cite the birds on Susa I and decorated vessels (Fig. 22, 1, 2), painted vessels from Jamdat Nasr and Mahasna (Fig. 24, 6, 7), Proto-literate votive bowls with bevelled rims and Egyptian rough and late bowls (Fig. 38, 1-5), Proto-literate footed vases and Egyptian basalt vases with a conical foot (Figs. 44, 5-9; 45; 46), and the acceptance of Frankfort's correlation of Asiatic and Egyptian theriomorphic vases (cf. Glanville in *JEA*, xii, 1926, pp. 57-69). Still other correlations are invalidated by insuperable discrepancies in date, which in the case of Halaf stone vessels from Arpachiyah and Egyptian examples found at Maadi or dated to

^{*} Cf. now Brunton's publication *Matmar*, p. 21 and pl. xvi, 47. There is a copper axe also from Maadi; cf. Brunton, *loc. cit.*, and M. Amer, *Bulletin of the Faculty of Arts*, Cairo University, ii (1934), p. 177.

the Protodynastic period would be sufficient to disconnect features possessing far more similarity than these.

In addition to unsound comparisons, Dr. Baumgartel's neat picture of parallel developments in Asia and Egypt is achieved by disregarding the detailed information on prehistoric Asia now available. It is no longer possible to divide the Asiatic cultures with painted pottery into two phases; they represent many specific traditions. This means that Dr. Baumgartel's method of gathering comparisons for cross-lined or decorated pottery from a large number of different cultures widely scattered in time and space is invalid. For example, she draws parallels for designs on the cross-lined ware from, among others, Siyalk I and II, Giyan V B and D, and Susa I, which cover an enormous range (cf. McCown, *Comparative Stratigraphy of Early Iran*, Table II). If comparisons are to have meaning, they must reflect contacts either by trade or migration, but it is impossible to imagine real occurrences capable of carrying to Egypt features drawn from many Iranian cultures or from both the Warka and Proto-literate periods. Dr. Baumgartel's comparisons do not reflect historical events as do the Mesopotamian features, all derived from the later part of the Proto-literate period (i.e. Jamdat Nasr), which appear in Egypt during late Gerzean. These remain as the only substantial body of predynastic connections with Mesopotamia.

In her discussion Dr. Baumgartel underestimates the continuity linking the various predynastic phases. In the first section she referred to it in writing that Amratian "belongs wholly to that line of culture which began to take root in Egypt during Tasian and Badarian times"; she hesitated only between the possibilities that Amratian developed directly from the preceding cultures or was imported by fresh groups of southerners. But in the second section she mentions only two alternatives—the Amratians either absorbed a very strong Asiatic element or were themselves Asiatics. In the case of Gerzean she is convinced that it was brought into Egypt by Mesopotamian invaders, who established the two prehistoric kingdoms of Egyptian tradition, a southern one with its capital at Naqadah and a northern one near the entrance to the Fayum. However, a case can be made for considering Gerzean as a direct descendant of the older Egyptian series; a great deal of its assemblage continues that of Amratian, so much so that the new features can be regarded merely as important additions to the culture, rather than signs of fundamental and abrupt change caused by large scale migrations.

Even if the possibility that new ethnic groups contributed to the development of Gerzean is admitted, the claim that such influence came from Mesopotamia must surmount one serious objection. Of the various

new features with unquestionable foreign affinities appearing in the earlier part of Gerzean, only the wavy-handled jars became a characteristic feature of the period and yet this class was derived from Palestine. On this subject, Dr. Baumgartel says only that it is "not too daring to assume a connection with Palestine at a time when the Naqada II culture was firmly established in Egypt." She states her conviction that Palestine was not the route by which Asiatic influences reached Egypt, but otherwise makes little reference to Gerzean connections with Palestine, which were, however, of considerable importance.

In the discussion of Egyptian characters which she derives from Mesopotamian features of the Proto-literate period, Dr. Baumgartel has occasion to emphasize a little-known aspect of the predynastic assemblage. She points out that incised vessels were commoner than indicated in Petrie's publications, so that, when taken together with the incised pottery from the settlement material of Caton-Thompson and Brunton, they constitute a definite group, and indicates that they may be characteristic for village sites. In raising the question of the incised pottery and in underlining the importance of settlement areas, particularly that discovered at Naqadah, Dr. Baumgartel brings into the foreground the one-sided nature of our knowledge of Egyptian prehistory and reveals the need for thorough investigation of additional village sites.

The second part of this book is of less value than the first; its main theses, the claims for an Iranian origin of the cross-lined pottery and a Mesopotamian source of Gerzean, are based on insubstantial evidence. In the first section, exception may be taken to Dr. Baumgartel's views on the Northern Egyptian cultures, a concomitant of her discussion of Heliopolis, which does, however, yield new insight into this controversial question. The first section also gives an important reassessment of sequence dating. Indeed, this book, even in its debateable portions, is a stimulating work indicating many of the unsolved problems in Egyptian prehistory. It is greatly to be hoped that Dr. Baumgartel will be able to finish her catalogue of the objects excavated by Petrie and his assistants, the cardinal importance of which she has demonstrated in the present book. Until these materials are made available, it may be impossible to place Egyptian prehistory on a secure basis.

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A STONE AGE CAVE SITE IN TANGIER: Preliminary Report on the Excavations at the Mugharet el 'Aliya, or High Cave, in Tangier, by Bruce Howe and Hallam L. Movius, Jr. (Papers of the Peabody Museum of American Archaeology and Ethnology,

Harvard University, vol. xxviii, no. 1). Pp. 32, figs. 8. Cambridge, 1947. \$1.00.

High Cave is the most important prehistoric site in the International Zone of Tangier and appears to contain the longest stratigraphic succession. Work at this cave was begun in 1936 by Dr. Ralph M. Nahon and Mr. Hooker A. Doolittle, then U. S. Consul-General in the area, and continued until the United States entered the war, with Dr. Carleton S. Coon of Harvard University participating from 1939 on. The excavations were later resumed by the American School of Prehistoric Research under the direction of Dr. Hugh Hencken.

The present report is concerned with the work done before the war, and in particular with the Palaeolithic strata, which underlie Neolithic, Roman, and Moslem deposits and were largely excavated under Dr. Coon's direction. Since this is a preliminary report, the authors confine themselves to a descriptive account of the stratigraphy and of the specimens found. They suggest, however, the existence of three periods: (1) a moist phase corresponding to stage 1 of the Würm glaciation in the Alps; (2) a dry period equivalent to the subsequent Laufen retreat; and (3) a second moist phase, corresponding to Würm 2. Throughout these periods the culture was basically Levalloisio-Moustierian, more or less pure during Periods 1 and 3 but mixed with an industry of Solutreo-Aterian type during the second period.

The current work at this site is intended primarily to check the geological succession outlined above. The authors stress that this is necessary before establishing a definite cultural sequence, since the latter will depend largely upon the dating.

High Cave derives part of its importance from the discovery of Neanderthal bone fragments in the lower cultural deposits, corresponding to the first of the three geological periods. The occurrence of Solutrean types in the second period is also unusual for North Africa and perhaps to be explained by the position of the site across the strait from Gibraltar.

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IRVING ROUSE

REPORT ON THE EXCAVATIONS AT HYRAX HILL, NAKURU, KENYA COLONY, 1937-1938, by *Mary D. Leakey* with contributions by *L. S. B. Leakey* and *P. M. Game* in "Transactions of the Royal Society of South Africa," vol. xxx, Part iv, pp. 271-409; figs. 35 and plans 3. Capetown, 1945.

This excellent detailed report is an example of the meticulous technique applied by Mary Leakey. Excavations at Hyrax Hill, begun during July, 1937, covered a period of eighteen months. Three occupational levels were revealed: (a) Neolithic and a contemporary cemetery with an obsidian industry, prob-

ably derived from the Upper Kenya Aurignacian (Phase B) and pottery including distinctive ovoid beakers; (b) above, fragmentary stone basins of Gumban B variant; and (c) stone-walled enclosures and burial pits with iron objects, glass beads, water-pipe bowls, cowrie shells and developed pottery resembling modern East African forms. A detailed description of the methods of excavation has been given. Dr. L. S. B. Leakey has appended a note on the 38 Neolithic skulls and five Iron Age burials. Mr. P. M. Game, Assistant Keeper, Department of Mineralogy, British Museum, has contributed a note on the relationships of various obsidians collected by Mrs. Leakey in Kenya Colony.

WASHINGTON, D. C.

HENRY FIELD

MESOPOTAMIAN ART IN CYLINDER SEALS OF THE PIERPONT MORGAN LIBRARY by *Edith Porada*. Pp. 81, figs. 108. Gallery Press, vi, New York, 1947.

The book deals with outstanding examples from the 1,128 pieces in the collection of the Pierpont Morgan Library. A detailed catalogue of the collection is due to appear as Volume 1 of the Corpus of Ancient Near Eastern Seals in the United States and Canada.

In the introduction (pp. 1-13) the author gives an outline of the artistic conventions used in Near Eastern seal-engraving. In this glyptic art three main subjects are represented: Contests with animals, ritual scenes and mythological scenes. The seals originally were practical devices used to stamp property in token of ownership; the innate artistic gift of the seal-cutters, however, made the seals artistic objects of distinct aesthetic value. Animal forms are subjected to laws of space and composition, and heraldic schemes arise which later on are to exercise great influence on Western Art. The different periods are treated as follows:

First the purely Mesopotamian seal-engraving (pp. 14-70) is divided into the following periods: Uruk, Jemdet Nasr, and Early Dynastic which in its turn consists of three periods. The first one, the First Early Dynastic Period, also termed "Brocade Style," shows great affinity for the preceding Jemdet Nasr period. The Third Early Dynastic Period is followed by the Akkad, a Period which is dominated by the Semites. Then follow the Periods: Post-Akkad; Third Dynasty of Ur; and Isin and Larsa, again a Semite civilization eventually dominated by the Amorites of the First Dynasty of Babylon. After the fall of Babylon, glyptic art separates into a South Mesopotamian and a North Mesopotamian branch. In the South we find the Cassite period and in the North the Mitannian period, continued by the Middle Assyrian and the Neo-Assyrian periods. The Neo-Babylonian and the Achaemenid are the final periods of Mesopotamian seal-engraving.

Non-Mesopotamian glyptic art, i.e. seal-engraving of the region surrounding Mesopotamia, is termed a "derivate style," (pp. 71-81). It includes seals from the Assyrian merchants' settlements in Anatolia, and Cappadocia; seals from Syria (1900-1200 B.C.); as well as Palestinian, Hittite and Cypriot cylinders.

As emphasized by the author herself, the book is meant to be an introduction to the subject of seal cylinders, and, being intended for popular use, its explanations are necessarily of a summary character. The division of Mesopotamian art into different periods is based on Frankfort's monumental work *Cylinder Seals*, 1939, where the division is made according to stratigraphical observations. The absolute dates which Edith Porada gives for the periods derive from Albright (*BASOR*, 88, p. 32). Concerning Non-Mesopotamian glyptic art she differs from Frankfort. For her Syrian seal-engraving represents an entity, whereas Frankfort distinguishes a First, Second and Third Syrian group with the corresponding Mitannian, Hittite and Palestinian seals. Unfortunately there are no Syrian or North Mesopotamian seals of the early third millennium represented, nor any Iranian ones of the fourth millennium which are certainly to be found in the Pierpont Morgan collection. The author succeeds very well in assigning the different pieces to their respective periods on the grounds of stylistic criteria. The attribution of figs. 64-75 to Middle Assyrian glyptic art of the twelfth and thirteenth centuries is excellent. Figure 68 (Ward, *Seal Cylinders*, 1069) is rightly assigned to the thirteenth century, whereas Frankfort says of this piece: "possibly an archaic Non-Babylonian imitation" (*op. cit.*, p. 189, note 2). Figure 72 (Ward, *op. cit.*, 587), representing a hero pursuing ostriches, belongs, according to Porada, to the twelfth century; according to Frankfort, however, similar pieces with ostriches (pls. xxxv, i and xxxvi, b, Ward, *op. cit.*, 597) belong to later times. Moortgat, during the years 1941-1944, was able to give a thorough elucidation of thirteenth and twelfth century glyptic art, thanks to the dated impressions in the Berlin Museums. Moortgat assigned to the thirteenth century fig. 68 (*Zeitschrift für Assyriologie*, 47, fig. 9, p. 57) as well as Ward 597 (*ibid.* fig. 4, pp. 53 sq.; cf., *ibid.* p. 65) which Frankfort hesitated to assign to the Neo-Babylonian period. Moortgat thus made it possible to date the first appearance of the ostrich. In her treatment of the Middle Assyrian period the author follows Moortgat throughout.

It is interesting to note that there is an identical piece to fig. 23 of the Akkad period in Geneva, Musée d'Art, no. 12467 (Borowski, *Cylindres et Cachets Or*, pl. vi, fig. 25). What Porada says with regard to the Uruk Cylinder seals: "... nor can we point to a gradual development resulting in the glyptic art that confronts us on these Uruk Seals ..." (p. 14) may be

true; the development of glyptic art in general, however, can be traced through the preceding periods. On the stamps of Syria and Northern Mesopotamia, especially of Tepe Gawra (Tepe Gawra xvi, cf. E. Douglas Van Buren, *Orientalia*, 16, pp. 407 f.), there are clearly to be recognized naturalistic representations which may be considered as prototypes of the naturalistic representations of the Uruk cylinder seals.

Edith Porada's reproductions are perfect and her work represents a valuable introduction to the subject of glyptic art which is becoming more and more important as a means of determining Near-Eastern cultural development.

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KAM'TANA DOBA V UKRAINI, DIE STEINZEIT IN DER UKRAINE, by *Vadym Schtscherbakiwskyj*. Pp. 87. München, 1947.

This little mimeographed volume is a summary of the lectures which the author delivered in 1946 in the Ukrainian Free University in München. Because of the difficult conditions under which the University has to work and publish, there are no illustrations; these were destroyed in Prague during the war. Nevertheless this book is not only a tribute to the industry of the scholar, but it offers a good survey of the whole history of the Stone Age in Ukraine. The author is familiar with the newer discoveries in the Soviet Union, but he remains apart from the efforts to interpret these on the basis of purely Communist ideology. The work should be of real value for its attempts to bring together all the various cultures of the area treated.

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THE GREAT PALACE OF THE BYZANTINE EMPERORS, BEING A FIRST REPORT ON THE EXCAVATIONS CARRIED OUT IN ISTANBUL ON BEHALF OF THE WALKER TRUST (The University of St. Andrews) 1935-1938. Pp. xv + 108; frontispiece and key; 58 plates incl. 13 in color; 7 plans incl. 1 in color. Oxford University Press; London, 1947. (Price of American edition, \$40).

This eagerly awaited volume presents the results of four seasons of excavation (1935-8) at the site of the Great Palace at Constantinople. Publication of this report was planned in 1938 but was delayed by the war. The volume has been edited by David Russell of the Walker Trust. The authors of the chapters are G. Martiny of Berlin, who writes on the buildings discovered; R. B. K. Stevenson, who writes on the pottery found in 1936-7; and G. Brett, who provides a note on the nomenclature of the Great Palace, and describes and discusses the mosaic.

The principal result of the excavations was the un-

earthing of a rectangular peristyle court containing a mosaic whose discovery has well been described as sensational. There are in addition pottery, architectural fragments, sgraffiti, brick stamps, fragments of wall painting, a few minor inscriptions, and small finds.

The court lies on the upper terrace level of the palace area, east of the Hippodrome, and adjacent to the substructures of two buildings, identified as churches, which have already been described by Mamboury and Wiegand in *Die Kaiserpaläste von Konstantinopel zwischen Hippodrom u. Marmara-Meer*. In such a discovery one would hope to find a fixed point which, would make it possible to some extent to verify, and where necessary to correct, the topography of the palace as it has been reconstructed in the past from the literary evidence. Dr. Martiny is satisfied that the complex as uncovered by the end of 1938 consists of the Heliakon of the Pharos, with the Pharos itself, the Church of the Theotokos of the Pharos, and the churches of St. Elias and St. Demetrios. This conclusion will not be accepted by all scholars. A discussion of the problem cannot be undertaken here since it would require much more space than can be allotted to any review. It will, however, be useful to readers who are not specialists to point out some of the defects from which Dr. Martiny's treatment of the subject suffers.

Dr. Martiny's chapter gives the impression that he has depended, for the literary texts, largely on Richter's *Quellen der byz. Kunstgesch.* He was apparently unaware that in all such matters it is still essential to consult Du Cange's *Constantinopolis Christiana* (Paris, 1680), in which he would have found additional material on the Church of the Theotokos of the Pharos (Book IV, p. 95). He does not mention the collection of material on the Pharos in F. W. Unger, *Quellen der byz. Kunstgesch.* (Vienna, 1878), pp. 266-268, though he seems to have used this work. On p. 19 he cites Ammianus Marcellinus, XXII, in support of a statement on the location of the Pharos. Dr. Martiny's statement proves to be simply a repetition of a statement by Unger which happens to be printed just below Unger's quotation from Ammianus. The passage in Ammianus, XXII, viii, 8 (to which both Unger and Martiny give an incomplete reference) has to do with another subject.

On page 20, n. 8, Dr. Martiny writes of the late abbé Vogt's note on the excavations in *Echos d'Orient*, xxxv (1936), pp. 436-441. He mentions that he told the abbé Vogt, when the latter visited the excavations in 1936, that the excavators believed that they had found the Heliakon of the Pharos. He goes on, "Very soon afterwards, when he [Vogt] found himself forced to give an opinion about our excavations in print, he did not adopt this theory, although it was altogether in accordance with his own and his brother's plan. He tried in-

stead to identify the newly excavated ruins with the Lausiakon. I am persuaded that being under the necessity of publishing something, he refrained from anticipating our official publication, and so spoke of the Lausiakon (p. 440). For this I now thank him." Do Dr. Martiny and his editor actually expect the reader to believe that so experienced a scholar as Vogt would create and put into circulation a false hypothesis in order to avoid anticipating the official publication? It seems incredible. Had he felt such scruples as Dr. Martiny attributes to him, Vogt could simply have remained silent; he was under no obligation to publish a note on the excavations unless he had something to say which he considered of value. Incidentally, Dr. Martiny seems to have misunderstood Vogt's point, for Vogt actually believed that the peristyle was the Phiale of the Greens, which is quite another thing from the Lausiakon (in addition to Vogt's remarks in *Echos d'Or.*, loc. cit., see his Commentary in the *Book of Ceremonies*, II, pp. 105-106, published in 1940). It is to be regretted that Dr. Martiny did not treat the abbé Vogt's hypothesis seriously, for his dismissal of it without an attempt to refute it will cause some scholars to look askance at Dr. Martiny's presentation of his own hypothesis. It is unfortunate that we cannot have further comment on the subject from Vogt, who died in 1942.

The topographical theory advanced by Dr. Martiny had already been suggested in a note on the excavations by Mr. Brett in *Antiquity*, xi (1937), pp. 356-359 (with plan by Martiny), in which Brett advanced the identifications later proposed by Martiny (with the exception of the identification of the Pharos). Mr. Brett supported this hypothesis with the statement (p. 359) that "further excavations on the northwest side of the courtyard reveal the Chrysotriclinos." Such excavations are not indicated on the plan published by Brett. Mamboury in *Byzantion*, xiii (1938), pp. 304-305, questioned the identifications, but observed that it would be necessary to await the final report before deciding. Janin in *Echos d'Or.*, xxxviii (1939), pp. 129-130, refrained from discussing Brett's hypothesis, but pointed out that the evidence of the work through 1938 tended to support Vogt's identifications of the Phiale of the Greens. Finally, in Martiny's chapter in the official report, the Chrysotriklinos has vanished, but the identification of the Heliakon and the surrounding buildings is maintained, and the opinions of Mamboury and Janin are ignored. Is one perhaps to understand that Mr. Brett originally intended to write that "further excavations . . . should reveal the Chrysotriklinos"?

A serious defect is the lack of an over-all plan showing the relation of the sites excavated to St. Sophia, the Augustaeum and the remainder of the palace area previously studied by Mamboury and Wiegand. Plan

59 shows what is conceived to be the area of the Great Palace, including part of the Hippodrome. As orientation, this is adequate only for specialists who are already familiar with the larger overall plans of Mamboury published by Lietzmann in *Gnomon*, xii (1936), p. 232, and by Schneider, *Byzanz*, pl. 10. The similar lack of an overall plan in the study of Mamboury and Wiegand had been criticized by reviewers of that work (e.g. by Lietzmann, *op. cit.*, and by Weigand, *Byz. Ztschr.*, xxxvi [1936], p. 167). Dr. Martiny knew Mamboury's plan as published by Schneider (cf. p. 1, n. 3), but he and his editor either were unaware of the criticism of Mamboury and Wiegand's book in this respect, or they did not consider it necessary to provide such orientation for non-specialists.

The reviewer hopes that he appreciates the extraordinary difficulties under which the volume has been produced. During the war, Martiny could not communicate with his colleagues, and the circumstances of the war made it impossible for him to give final revision to his chapter (p. vi). Brett, as a prisoner of war, was unable to carry on his work. With the end of the war there was a natural desire to give definitive publication, with all possible speed, to excavations which had aroused such interest and expectation. It does, however, seem proper to question whether, the material at hand being what it was, such promptness in publication was desirable. One can wish that, when Dr. Martiny was unable to revise his chapter, the manuscript had been submitted before publication to some scholar competent to deal with the subject. This would have entailed further delay in publication; but in its present form Dr. Martiny's chapter will suffer from the disappointment and annoyance of specialists, and will mislead those readers who happen not to be aware of its defects, but are naturally impressed by the imposing appearance of the volume and the prestige of the auspices under which it is published. If speedy publication was really essential, it would have been far better to exclude all theoretical discussion of the topography. A factual presentation (equipped, perhaps, with the bare bibliography of Vogt's, Mamboury's, Janin's and the excavators' opinions) would have been far more useful.

The mosaic is magnificent, and scholars will be grateful for the excellent plates on which it is published here. The floor shows mythological and hunting scenes, pastoral vignettes, scenes of children at play, architectural and landscape motifs, and a curious scene of what apparently is something like the modern hoop-race. The richness and variety of the detail and the delicacy of the workmanship make the discovery of this floor an event of the first importance in the history of late antique art. The mosaic is dated by the excavators, on archaeological evidence, in the first quarter of the fifth century after

Christ, though Martiny notes (p. 16) that "many archaeologists who have seen the mosaic would have preferred to date it as early as the fourth, if not actually to the third century." A part of the mosaic which was discovered during the season of 1938 is not published in this volume (cf. p. 72, n. 1). A portion only of this part is reproduced in Mr. Brett's article on the mosaic in the *Journal of the Warburg and Courtauld Institutes*, v (1942), pl. 12b, facing p. 38.

HARVARD UNIVERSITY
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G. DOWNEY

ANCIENT CORINTH, A GUIDE TO THE EXCAVATIONS.
American School of Classical Studies at Athens.
Fourth edition, revised and enlarged by Oscar Broneer. 127 pages, 2 plans, frontispiece and 23 figures in the text. Athens, 1947. \$1.50.

The compact and useful guide to the excavations of Corinth, of which the third edition appeared in 1936, has been revised by Dr. Oscar Broneer, Acting Director of the American School of Classical Studies at Athens. The large amount of excavation carried out on the site between 1936 and 1940 and the study devoted to some of the unpublished buildings in 1946-47 necessitated this considerably enlarged fourth edition. The accounts of the recently studied buildings in the Agora will be particularly welcome to the visitor in Greece and to those who have not seen the site for some years: the South Stoa, "probably the largest secular structure in Greece proper"; the Bema and Central Shops; the Roman Temples at the west end of the Agora; the interesting Race Course found in the eastern part of the Agora; the Southeastern Building—possibly the Tabularium. Among the outlying sites a Tile Works with a well preserved kiln of the Greek period, discovered in 1940, is new.

The arrangement of the material, descriptions of the individual buildings, the choice of figures and plans make the book very usable. The accounts are succinct and clear giving an outline of the history of the building and enabling the visitor to understand its function and form from the visible remains. His visualization of the structures is aided by a liberal selection of restorations rather than photographs of the actual remains—which latter are wisely confined to interesting and well preserved units of the structures. A folding plan of the Agora has been brought up to date by J. Travlos and a new plan of the Agora and the more important outlying sites, Odeion, Theater, and Asklepion enables their relationship to be readily grasped.

There is some confusion in the references to Temples H and J on p. 75 which may cause the attentive follower of the guide some hesitation, but, generally speaking, the book will facilitate the visitor's enjoy-

ment of one of the most beautifully situated and interesting sites of Greece.

UNIVERSITY OF CHICAGO

CARL ROEBUCK

DAS ANTIKE ATHEN IN ZWANZIG FARBAUFNAHMEN, by *Hans A. Bauer*, 20 color plates with accompanying text. Paul Neff Verlag, Wien, 1947.

The photographer who also wrote the text is a professor of physics, the author of a much used handbook on atomic physics. This book is therefore not the work of a professional archaeologist nor is it addressed to specialists. The plates reproduced are a selection from many more equally good negatives; it was impossible, under present conditions, to make the book any larger.

The main attraction is, of course, the color plates (made from Agfa color negatives), but it should be emphasized that the lengthy captions (each of about 300 words) contain accurate and pertinent information written in excellent taste.

The plates show the West side of the Acropolis at sunset (I and II), the Nike temple as restored in 1940 (III), the East side of the Propylaea (IV), the Parthenon (V, VI, VII), the Erechtheion (VIII and IX), a Corinthian capital (X), the Olympieion (XI and XII), the Arch of Hadrian (XIII), the Roman Agora (XIV) with its gate (XV) and the Tower of the Winds (XVI), the tombstone of Demetria and Pamphile from the Kerameikos (XVII), and three panoramas of Athens as seen from the Acropolis (XVIII) and from the Lykabetos (XIX and XX).

The color plates compare well with the best reproductions found in recent issues of the National Geographic; this does not mean that they are perfect. Their unique value lies rather in the fact that they may claim to be the first published color plates showing the antiquities of Athens.

PRINCETON UNIVERSITY

A. E. RAUBITSCHKE

EWIGER HUMANISMUS, 10. HEFT, **DIE ANTIKE PLASTIK UND DER HUMANISTISCHE GEDANKE**, by *Alfons Watschitzky* (Schriftler der Österreichischen humanistischen Gesellschaft in Innsbruck). Pp. 30, figs. 9. Innsbruck, Felician Rauch, 1947.

This is an earnest and eloquent essay, one of a series devoted to various aspects of humanism. If the present work is a representative sample it speaks well for the series as a whole.

The author briefly recalls the influence exerted by Greek sculpture on the great humanists from the Renaissance to Goethe, and pleads for a renewal of this influence in our own time. We are not asked, however, to feel, in the presence of the Apollo Belvedere, the raptures it inspired in Winckelmann or Goethe. Indeed, it is obvious from the author's succinct and

sympathetic review of the history of Greek sculpture that he is quite aware of the change that has overtaken our attitude to the great statues. Yet one thing remains the same—their power to quicken and transform and illumine the mind and sense of the observer.

And it is in the presence of this fact that the author calls upon the archaeologist to perform with greater devotion his task as interpreter of the ancient to the modern, as intermediary in promoting the quickening influence of Greek art on his contemporaries.

We may claim, to be sure, that the great contemporary studies amply fulfill this function. For it is impossible to read their pages without becoming aware of the exciting quality of the objects they describe. (And we may suspect that it is from such guides, rather than from Winckelmann, that the author derives his own genuine and sincerely-felt emotion for Greek sculpture.)

Yet there are also scholars, in our own day, who have declared with considerable acerbity that the archaeologist, if he raises his eyes from counting and classifying his potsherds, does so only at the risk of making a nuisance of himself.¹ And we may conclude accordingly that a fresh plea for the humanistic value of archaeology is not untimely.

The issue between scientific and humanistic archaeology has already been defined for us in America by Professor Rhys Carpenter, and there are echoes of his argument in the present essay. Apparently as a result of his acquaintance with Professor Carpenter's work the author is led at one point, in listing the chief representatives of the humane spirit in archaeological inquiry, to include *en bloc* the contemporary archaeologists in America. The reactions of individual members of this group will doubtless vary on finding themselves bracketed with Winckelmann, Herder, and Pope Leo the Tenth.

UNIVERSITY OF CINCINNATI

CEDRIC BOULTER

THE THEATRE OF DIONYSUS IN ATHENS, by *A. W. Pickard-Cambridge*. Pp. xv+285, plans 3, figs. 138. Oxford: Clarendon Press, 1946. Price, \$7.50.

Mr. Pickard-Cambridge's long interest in the theatre is something to be grateful for. It is forty-one years since he brought out his revision of Haigh's *Attic Theatre*. In this new book, which is concentrated on the theatre buildings, he has given us a study of a complex subject which is scholarly, wise, and at the same time simple. The single point upon which the author himself places most emphasis is that he has changed his mind on the major issue of the whole field, though it was evidently not easy for him to do so. He no longer believes, as Haigh in spite of every-

¹ See, for example, the remarks of R. H. Wilenski, quoted by Seton Lloyd in *Mesopotamia*, p. 173.

thing continued to believe, that the classical theatre in Athens had a raised stage.

The book is a history of the theatre-space and the buildings from the sixth century to the time of its decay in the late empire. It is not a chronicle of architectural operations and building materials, of ruins and the controversies of archaeologists. "The theatre mainly as a setting for the drama," matters of "human interest" (p. vii) are the central concerns and they hold their place very well through a study which is nonetheless a careful examination of the important issues of the last sixty years. The work of Doerpfeld, Bulle, Fiechter, Flickinger, Allen and others is given full consideration at critical points. There is a classified bibliography (pp. 272-278).

The philologist, like myself, being constantly under the necessity of visualizing the scene, needs to know, as an aid or a check to the imagination, what could and could not be done in this theatre. He will find much to think about here in the second of these categories, little in the first. Mr. Pickard-Cambridge's work is distinguished by its objectivity, its modesty and perhaps also by a native distrust of Teutonic deduction. If, in the result, he leaves us with little, where from time to time we thought we had a good deal, this as he sees it, is in the nature of the evidence. There was, he believes, no prothyron, no *eccyclema* in classical times (pp. 75-100, 100-122), no *proskenenion* (in Doerpfeld's sense) before the middle of the second century B.C. (pp. 156-160, *et passim*), no *periaktos* for the classical drama (pp. 126-127, 234-238). Further, there is little that can be carried over from later painting to a reconstruction of the scene in Athens (pp. 220-234).

Now, whether in stripping away from the scene as others have reconstructed it the author is excessively negative, whether in learning to dispense with a stage he has learned to dispense with too many other things is a question for somebody who is versed in each department of this subject, as I am not. But such is my impression, for example, of the discussion of the *eccyclema*, where the conclusion is this: "there is no play in which its use can be considered necessary" (p. 115).

The interpretation of the important case of the *Agamemnon* is not correct. Clytemnestra, it is suggested, is standing "by the display of the bodies [of Agamemnon and Cassandra] in a moderately wide doorway, on a very simple and unobtrusive vehicle" (p. 107). The traditional disposition on the *eccyclema* is rejected: "Apart from the obvious objections to the display of Agamemnon in the bath, it is unlikely that Cassandra was also in the bath-room when she was slain, and the text nowhere gives a hint of the display of the bath, but only of the blood-stained net, in which the chorus see him enveloped (l. 1492)" (p. 106). But

the proprieties aside (more at home, I suggest, in England than in Athens), the text is explicit that the chorus does see Agamemnon dead in his bath: "Oh earth, earth, would you had taken me before I looked upon this man lying for his last resting place in a silver-sided bath" (ll. 138-140).

Further, the author's case against the early use of the *eccyclema* rests in part upon what he calls "a well-attested late usage" and the "general sense" of *ἐκκύκλημα* as "display," "reveal" (pp. 109, 120). In some instances, such as the situation of Ajax among the slain animals, the scholiast's "*eccyclema*" could thus be taken simply in the sense of "disclosure" (pp. 109 ff.). But the word cannot be said to occur often in this sense, and when it does, being late, it could well be a metaphor borrowed from the theatre, from the *eccyclema* itself.

So far as the *eccyclema* is concerned, the plays, it is true, are not conclusive evidence that an *eccyclema* was used. But no more (I should say even less) are they evidence that an *eccyclema* was not there. *Something* is needed for the *Agamemnon*. The not-conclusively-known and the non-existent are not identical (an important qualification of Mr. Pickard-Cambridge's kind of argument, of which he is well aware, but which the reader is apt to forget). For myself, I can see no reason for not continuing to follow the old scholiasts, and the evident sense of the disputed passage in *Acharnians* (pp. 101-104), and I continue to entertain the notion that the *eccyclema* was used in the fifth century.

The inadequacy of our knowledge of stage-production is illustrated by the discussion of the *Prometheus* (pp. 27-42). How was the protagonist nailed to the rock? Are the hero, rock, and chorus collapsed in full view down to Tartarus? If so, how does Prometheus come up again for the next play in the trilogy? How does he get down onto the orchestra after his release? These stubborn questions are met by Mr. Pickard-Cambridge with characteristic restraint, but the significant thing is that, with all the work that has been done on the theatre, there is only this to go on: what the author feels could not be done; the play itself; and the principle that some difficulties cannot be solved because, "we cannot tell how much the poet was content to suggest by language without presenting it visibly to the audience" (p. 38). On the question of a lay-figure he makes a pretty point: "What is certain is that Prometheus cannot have been of different sizes in different parts of the trilogy" (p. 42).

The issue of the raised stage is also settled on grounds internal to the plays: "In regard to these two points [the stage and the *paraskenia*] archaeological evidence is wholly wanting for the fifth century" (p. 30). "There are no scenes in extant plays which require a raised stage and could not be acted without it;

there are many in which action would have been ruined or impossible with such a stage" (p. 69). So far the author goes with Doerpfeld-Reisch, and with those who found that the plays supported the theory. But he stops well short of the farther reaches of this school, which in Doerpfeld's case meant carrying stageless acting down to Roman times (p. 257). When the intimate relation of chorus and actor was broken, with the diminishing size and importance of the chorus, the stage or *logéion* came into use. This is dated as early as the latter part of the fourth century B.C., first in the theatre at Epidauros (p. 204). However, Mr. Pickard-Cambridge is careful not to draw inferences from the other theatres to the Athenian one (p. 209) where the raised stage was not used, he believes, until the middle of the second century B.C. (p. 182).

Finally, since the effect of this book is to throw us back upon the plays themselves for the solution of our problems, the following comment will not be out of place.

Mr. Pickard-Cambridge believes that tragedy was ritual, and he makes use of this conception as a principle of criticism. For example: "even the introduction of a second or third actor would not make the introduction of a stage natural, so long as tragedy remained essentially ritual, and so long as, for the due performance of the ritual the essential element was the chorus which originally executed it. A separate and elevated stage for the actors would not come in until the performance became more entertainment than ritual" (p. 70). Aristotle is cited in support of this distinction between choral and "acted" tragedy as parallel to a development from ritual to entertainment (*Rhetoric* 1403b 33ff.). But Aristotle has nothing to say about ritual. He is simply commenting on the fact that in his own day the actors having perfected their technique count for more than the poets. The point is an important one, quite apart from the single question of the stage, because the "ritualistic" view fosters a prepossession about production in general: that it was austere, stately, economical in means and effect, above all that it was conventional. And though I hesitate to take issue here with the author of *Dithyramb, Tragedy and Comedy*, this is a conception of tragedy which I do not accept. There is no evidence that the tragedy we possess was the performance of pious rites rather than what it appears to be on the surface—poetry and drama. It has strong religious interests, it was performed at a religious festival, it is sometimes pious, but religious orthodoxy is notable chiefly by its absence. I am inclined to believe that this goes also for orthodoxy of performance. Tragedy was, over and above its religious interest, always entertainment, as it seems to me the plays show. It was experimental throughout its fifth century life. It was, in short, uninhibited by convention and we should therefore ex-

pect movement, and variety of means and effect. We should expect not merely the "statuesque and simple," but so much of simplicity and complexity, so much of the restrained and the unrestrained as the poet found to his purpose. Professor J. T. Allen's "Greek Acting in the Fifth Century" is a good antidote to the "stately" view (*Univ. Calif. Publ. Class. Phil.*, ii (1916) pp. 279-289). The "ritualistic" view imposes some serious limitations in our thinking about what went on in the Greek theatre.

UNIVERSITY OF CINCINNATI ALISTER CAMERON

DER FRIES DES TEMPELS VON BASSAE-PHIGALIA, by Hedwig Kenner (Kunstdenkmäler, herausgegeben von Ernst Garger, Heft 2). Pp. 50; figs. 21; pls. 26. Vienna, 1946.

Since Cockerell's engravings, published in 1860, no complete reproduction of the Phigalia frieze has appeared in print; so there is a definite need for this little monograph. In fact, one wishes that new photographs had been made for the purpose. But in present day Austria studies of ancient art must be limited to the materials at hand. If the pictures are not always satisfactory—too much detail is lost in the sharp black and white contrasts of many plates—it seems fair to remember that this book was produced under difficulties and intended only as a low-priced, handy edition of the famous monument. In the circumstances the publisher did a good job, and the Archaeological Institute of Vienna University made commendable use of its set of Phigalia photographs, by publishing them in this manner.

A brief text precedes the illustrations. Unfortunately it had to be written without sufficient knowledge of the recent research by Dinsmoor, especially the article in *MM Studies*, iv, 1933, pp. 204 ff., which the author could not consult (p. 40). Miss Kenner pleads for a single building period around 421 B.C. (pp. 5, 32 f.). Yet Dinsmoor observed that the building "represents the style of two periods." Only one, that of ca. 450 B.C., precedes the Parthenon and coincides with the likely activity of Iktinos. Important marble decoration, notably the Ionic and Corinthian capitals and the frieze, are definitely later than the Parthenon (Dinsmoor, *loc. cit.*, p. 225). The date of these reliefs is still a moot question; the hypothetical lifetime of Iktinos has no bearing on it. The frieze must be dated by its style—approximately 420 to 400 B.C.

In reading this part of Miss Kenner's summary (pp. 34 ff.) one realizes the progress made by Dinsmoor. Her reconstruction of the temple interior is definitely vitiated by Dinsmoor's findings. So are her remarks about the architectural arrangement of the frieze (pp. 40 ff.).

The greater part of the text, however, is devoted to the stylistic problems of the frieze. One will prob-

ably find her most valuable contribution in the descriptive catalogue of the individual slabs (pp. 41 ff.). Even here not all details are sufficiently clarified. Does the Lapith in slab 520 really wear shoes? Was the panther's skin in slab 537 added later? The other alternative, that both questions arise from the unfinished condition of the slabs, should at least be mentioned. Plates 10 and 18 are too indistinct to make the descriptions (pp. 43, 46) intelligible and creditable. And occasionally one doubts whether the descriptions match the realism of their object. The centaur of slab 527 bites the jugular vein of the Greek who stabs him, and strikes out with his hindlegs to keep another Greek from interfering. The implications are not funny, the author's remark on p. 7 notwithstanding.

Actually the Phigalia frieze exemplifies a rather peculiar style of Greek art at the end of the fifth century B.C. It is a difficult work to judge and analyze; and to the uninitiated reader the state of this problem, as presented by the author, may seem quite discouraging. In dealing with it Miss Kenner, after an introductory discussion of iconography, devotes about four pages to the search for the unknown artist of the frieze; six, to that high-classical manner of representing windswept garments which Ch. Picard has termed "la poésie du vent"; eight, to the distinction of craftsmen, or "hands," who had been working on the frieze; and only two pages, pp. 19-21, to its other characteristics. One will probably agree to most of her principal findings, especially the negative ones. One might, however, ask if it is not a foregone conclusion that the "Master of Phigalia" cannot be named at present. The most one can assume is that he was Peloponnesian, more likely than Athenian.¹ Nor can a precise chronology or stylistic definition be gained from the "poésie du vent." And that the "hands" of several craftsmen cannot be conclusively distinguished in photographs, without examination of the originals (p. 24, n. 36), is not only true but self-evident. Yet much methodical effort was spent in these comparatively unpromising questions. As a result the account of style grows unnecessarily vague and inconclusive.

These belabored questions and art-historical speculations should rest till fresh discoveries bring new clues to their solution. A work as well preserved as the Phigalia frieze carries a great deal of evidence in itself. The practical method is to concentrate on the monument first. This is also the best way to establish more definitely its particular style: the manner of representation which is proper to it, and the sentiment for which it stands.

Here much remains to be done. The Phigalia frieze

shows the classical style in a curious state of transition. The first period of free inventiveness is over; classicism is an established fact. In the Parthenon frieze every figure is an "original." In Phigalia not only is the reflection of the Parthenon art felt continually — this has been often stated — but frequently one figure repeats the posture, or pattern, of another figure within the frieze. For instance the Amazon in number 540 (pl. 20) repeats the motif of "Theseus" (pl. 21) with only slight variations. Typical fighting postures recur with very little change. The "poésie du vent" often is no more than a mannerism. The classical style here shows a tendency to become standardized; individual figures and groups frequently recall similar types in other Greek works of the late fifth century, especially Zanthos. (See the author's comments on number 532, 540, 541 and others. Regarding Zanthos, reference should be made to W. Schuchhardt, *AM.* lii, 1927, pp. 94 ff.) Compared with the art of the Parthenon, this is the approach of a second generation. Not unlike the sixteenth century mannerists, the Phigalia artists were interested in the perfection and variation of established, representational formulae which in their works became paradigmatic. Still their style was not static. The seemingly patterned figures and groups were subject to new modes of vision and a new emotionalism.

Nothing better illustrates the transitional character of the Phigalia frieze than the variety of body structures found, especially, in its male figures. This is one reason why the frieze proves difficult to date. The Greek in the center of slab 537 (pl. 18) reminds us of the art of Polycleitos. After-effects of the Parthenon, also, are often felt. A certain type of elongated torso with heavily vaulted chest is reminiscent of the massive Poseidon from the west pediment; e.g. the fighting Lapith in number 530 (pl. 11), the Greek in 532 (pl. 13), etc. The tersely built and agile Greek in 534 (pl. 15) even echoes Parthenon metopes. Yet other types anticipate the future: the Lapith in the center of number 526 (pl. 7) might be compared to the "Naukydes" standing Discobolus;² and the broad, squarish torsos favored by the "Theseus-Master" (pp. 26 f.; pls. 1, 21, nos. 520, 541) conspicuously anticipate creations of the fourth century, such as the Landsdown Hercules.³

These figures move in a world almost void of descriptive detail (p. 4), as is true of most classical friezes. But they have spatial existence, of a kind very rare in Greek reliefs of this period, for the concept of space, too, is here in transition. The spatial interpretation of the individual figures is not always the same. Thus, the "Parthenonic" fighter of slab 532 (pl. 13) moves straight from left to right; the similar figure of number

¹ Cf., on this point, another recent discussion of the Phigalia frieze: J. Charbonneau, *La Sculpture Grecque Classique*, (n.d.), pp. 58 ff.

² BrBr. pl. 682.

³ BrBr. pl. 691.

525 (pl. 6) turns back into space. On the one hand we are confronted with a flattened-out view, on the other, with a rendition in space of an almost identical motive.

Later the spatial representation of this motive became quite standardized in Greek art; compare, for instance, the excellent bronze reliefs in P. Willeumier, *Tarente*, Paris, 1939, pl. 16. Yet the development of Greek reliefs did not move uniformly, as under some mystic compulsion, from "flat" to "spatial" aspects. The frieze of the Mausoleum deals with space on radically different premises. Its figures appear mostly in contrasting, broadly expanded front views or abrupt side views; and when oblique views occur they create a more absolute and less pictorial space experience than in Phigalia.⁴ On the other hand the spatial representation of individual figures in Phigalia can be shown to correspond with vase paintings of the period. Compare, for instance, the Greek pulling the hair of a Centaur in slab 528 (pl. 9), and Aisons' Theseus.⁵

Occasional interaction between background and foreground is another characteristic of the Phigalia style. An especially interesting example is the group with the wounded Amazon in slab 542 (pl. 22).

The emotional content of the Phigalia frieze should also be observed. It contrasts curiously with the often noticed abstract character of the composition. Actually the underlying network of zigzag lines, so different from the flow of Attic friezes, like the battles from the temple of Athena Nike, rather intensifies the power and passion of the action. There is not much individualization. Can we really say with the author, (p. 8) that Greek art proceeded steadily from types to idealization and thence to individuality? The great period of character description—ethnographia—in Greek art was the fifth century, before the Parthenon. Now in Phigalia, even the Amazonomachy shows mere traces of that personalized conflict between hero and heroine ("Theseus-group," pl. 21), which only a short time before was so popular in these representations. The struggle between the men and the man-haters has grown more anonymous. Yet of all the great battles of Amazons in Greek art, this is the most savage. The fighting groups interlock with a deadly rage. In comparison, the similar fighters of the Mausoleum frieze are frozen in the very heat of battle, and in their trance-like isolation seem never really to meet.

This sweeping emotional context of the Phigalia frieze provides a background for highly realistic detail. An example is seen when Apollo and Artemis, the Saviors, arrive in the Centauro-machy and the Goddess brings the chariot to a sudden stop, using her right foot

on the ground as a brake, as one would on a bicycle (pl. 4). Such details are important; yet they scarcely explain the composition as a whole. The main theme of the Phigalia frieze is not merely an objective statement. Beyond and above the facts, this style stresses passion and suffering—subjective but valid forms of experience. Pain, agony and death are expressed in the faces; the author is right in stressing this point as unusual (p. 8). The price of victory is clearly mentioned (no. 539, pl. 23), as in other monuments of the time and, so often, in Thucydides. There appears little cause for triumph in the long chain of bitter, impersonal struggles, lined up in the sharp and angular rhythm of this picture epic. The classical style has here entered its romantic, emotional phase. To call this art "ein idealisiertes Geschwisterbild der Natur" (p. 3) is hardly an adequate description of the Phigalia frieze, where the abstract and manneristic elements combine so conspicuously with a keen and forceful realism of space, action, and sentiment.

INDIANA UNIVERSITY

OTTO J. BRENDL

ALEXANDER THE GREAT: THE MEETING OF EAST AND WEST IN WORLD GOVERNMENT AND BROTHERHOOD, by Charles Alexander Robinson, Jr. Pp. 252, frontispiece, end-paper map. E. P. Dutton and Company, Inc., New York, 1947. \$3.75.

"I do hope," says Professor Robinson in his preface (p. 16), "that I have succeeded in suggesting, in general terms based upon exact scholarship, a characterization which, partly new and partly a synthesis of what is already known, approximates reality." In the course of this characterization, the author tries to answer such questions as: "What were Alexander's motives in ordering his deification (if he did order it), what plans of world conquest did he have, what was his constitutional relationship to Greeks and barbarians (non-Greeks), what, above all perhaps, were his feelings toward race and race mixture and the idea that the world is one?" (p. 15).

The story is told as far as possible in the words of the ancient authors, especially Plutarch and Arrian, though the appearance of the page is not marred by innumerable quotation marks and dots. From the sources Professor Robinson draws the following conclusions. (1) Alexander's motive for deification was "political, a simple and direct way by which to make possible the efficient administration of a divided land" (p. 165). (2) The author is convinced (as against W. W. Tarn) that Alexander's plans included a "determination to conquer the West as well as the East" (p. 104). (3) Constitutionally, Alexander "was at once the king of Macedon and hegemon of the League of Corinth, the suzerain of Indian rajahs and the adopted son of a Carian queen, the Great King of the former Persian empire and the ally of the Greek cities of Asia Minor" (p. 230; cf. p. 74). (4) As for "the meeting of east and

⁴ Compare the "hair-pulling group" in slab 535 (pl. 16), with Mausoleum no. 1022; good photograph in Charbonneaux, *loc. cit.*, pl. 74.

⁵ E. Fuhl, *Masterpieces of Gr. Drawing and Painting*, 1926, fig. 107.

west in world government" (the timely subtitle of the book), "his aim clearly was to unify the empire and bind it together as a social, political and economic whole—or, as he expressed it, he bade all men to consider as their fatherland the whole inhabited earth, where they would have concord and peace and community of interests, and he further pledged himself to render all upon earth subject to one law of reason and one form of government, that of justice" (p. 230).

Most of these conclusions are "a synthesis of what is already known"; most scholars are familiar with them in the works of Ulrich Wilcken (*Alexander the Great*, tr. G. C. Richards, N. Y., 1932),¹ and W. W. Tarn (*CAH*, vi (1927), chs. xii and xiii). From Tarn we learn how Alexander found the ideal state of Aristotle and substituted the ideal state of Zeno; how to Alexander the brotherhood of man meant the brotherhood of certain aristocrats, an ideal which found its true historical significance only when it was continued, with the splendor of a hopeless dream, by men to whom it meant more than class rule and slavery. The line that begins with Alexander leads not only to despots and Popes, but to the watchwords of the French Revolution. Prof. Robinson will join the rest of the world brotherhood of scholars in welcoming Tarn's promised definitive two-volume re-working of his published research on Alexander and the sources.

What is new in Professor Robinson's work (cf. his article, "Alexander's Plans," *AJP*, lxi (1940), pp. 402 ff.) is his insistence, as against Tarn, that Alexander could hardly have dreamed of the unity of man without wishing to conquer the world. And he documents his conclusion by convincing analysis, proving, at least to the reviewer's satisfaction, that what our secondary authorities tell us about Alexander's plans for world conquest comes from a trustworthy source close to the conqueror himself.

Thus Prof. Robinson's acumen impales the reader upon the horns of a peculiarly unpleasant dilemma: apparently "the meeting of east and west in world government and brotherhood" could not be achieved in Alexander's time, and cannot be in ours, except by submission to the unchallenged rule of a world conqueror. For many of his readers, the price will seem too high to pay.

UNIV. OF WISCONSIN

PAUL MACKENDRICK

EARLY CHRISTIAN EPITAPHS FROM ATHENS, by John S. Creaghan, S. J. and A. E. Raubitschek. Pp. 54, pls. 10. Theological Studies, Woodstock, Maryland, 1947. \$2.50.

This volume has been reprinted from *Hesperia* xvi,

1947, with a foreword by B. D. Meritt. The occasion of the work is the publication of 34 fragmentary tombstones, belonging to the fifth century after Christ (p. 13), discovered during the American excavations of the Athenian Agora. The Agora texts are preceded by two sections, one in which new texts for 23 previously published Christian tombstones from Athens are offered, the other in which such matters as orthography, symbols, guide lines, and formulae are discussed. The substance of the commentaries on the individual texts will be found in this latter section. The two authors reveal a thorough acquaintance with the epigraphical material and cognate literature, as is to be expected from the combination of their special knowledge.

All of the Agora inscriptions are fragmentary, and the vast majority contain merely the word *κοιμητήριον* followed by the names of the Christians. The largest text is no. 15 which contains a curse on any who might violate the grave. The most interesting is no. 5 which records the death of the reader of the Church of Saint Agathokleia; the authors suggest (pp. 4 f.) that the Christian tombstones found in the Agora once stood in the cemetery of this church.

This reviewer has compared the editors' texts with the squeezes and photographs available in the Institute for Advanced Study, Princeton, and offers the following corrections. In no. 2, the character which is reported as a "Latin delta" at the beginning of the fourth line appears rather to be a delta inscribed over an omicron. In no. 8b, line 2, the badly worn surface does not permit the reading of any letter to the right of the kappa. Nor can the mark in the last letter-space of this line be taken as a certain part of any letter. In no. 11, the Princeton photograph, which is superior to the authors' illustration from the squeeze, reveals that the markings in line 1 do not correspond to the shape of any letters. They are similar to the deep scratches which are to be seen in other parts of the preserved surface. An examination of the stone will be necessary to determine whether the upright stroke in line 2 is an iota or part of a nu. Other restorations of this inscription may be possible, for, if the cross was symmetrically incised, there is hardly space in line 2 for the editors' restored text. In no. 29, there appear to be traces of letters above line 1. In no. I, line 4, the horizontal stroke, which is preserved to a length of 0.01 m., affords no evidence for the reading of a dotted nu. In no. VII, the nu, which is inscribed above the letters of line 4, is not part of an earlier inscription unless we are willing to assume that this letter was cut much deeper than others of the same text. This reviewer does not believe that any purpose is served by restoring proper names (e.g., nos. 8, 11, 20, 21, and XIV) when there are really many possibilities. Such names have a way of being perpetuated into indexes and finally being incorporated into stemmata.

¹ Wilcken disagrees with Tarn about world conquest and with Robinson about world brotherhood (Engl. trans., p. 221; German version, p. 207).

Only minor misprints have been noted. On page 46 (no. 21), for 1919, read 1939. On page 47 (third line from bottom), for below, read above. On page 50, for E. M. 9989, read E. M. 9981. In the footnotes there are references which have no obvious connection with the problem under discussion. For example, in footnote 67, the reference to Kent contains no information about the tombstone built into the East door of the Mount Lykabettos enclosure.

UNIVERSITY OF
CALIFORNIA

W. KENDRICK PRITCHETT

Six of a series of nine booklets edited by Gerda Bruns and printed by the brothers Mann of Berlin, with the permission of the American Military Government are reviewed below. The illustrations are all drawn from collections formerly in the great museum in Berlin and the selection of material suggests they were originally planned as museum guides.

GRIECHISCHE PLASTIK, von Carl Weickert, Pp. 77, figs. 44. ANTIKE BRONZEN, von Gerda Bruns, Pp. 86, figs. 46. GRIECHISCHE VASEN, von Hans Diepolder. Pp. 59, figs. 40. Verlag Gebr. Mann, Berlin, 1946.

The above three booklets are a heartening sign that archaeology is still functioning in Germany on a high level in spite of difficulties. In each a vast subject—Greek marble sculptures, Greek and Roman bronzes, and Greek vases, respectively—is surveyed from early times to the Roman period, and the various steps in the chronological sequence are illustrated by outstanding examples from the Berlin collections. The survey is thus not a vague, generalized account, but an examination of masterpieces, set before us in an orderly procession. We obtain a vivid picture of the development of Greek art in its chief phases and at the same time become acquainted with specific, representative works. This result could not have been obtained except for the competence of the authors, each of whom is eminent in his field.

Carl Weickert in his *Griechische Plastik* is particularly successful. He begins his story with the famous "Standing Goddess" and ends it with several Hellenistic pieces from Pergamon (not, however, the Pergamon Altar, which is the subject of a separate volume by Gerda Bruns). The sculptures are of course mostly familiar—though there are a few newcomers, for instance, the upper part of a life-size archaic statue of a helmeted warrior; but the descriptions contain so many astute observations that the reading is of profit also to the specialist.

Gerda Bruns's *Antike Bronzen* covers an even longer span than Weickert's *Plastik*, beginning in Minoan times and ending in the Roman imperial

epoch. The account reads smoothly and the selection of the material is admirable.

Hans Diepolder had perhaps the most difficult task, for the many aspects of Greek vases—historical, commercial, technical, artistic—are difficult to discuss in a concise account, and the Berlin material is exceptionally rich. Here, too, success is achieved by adherence to essentials, by the selection of significant pieces, and by the weaving of the story around these concrete examples. The method can be recommended to other museums as an attractive and instructive way to popularize their material.

The quality of the half-tone illustrations is surprisingly high. Only a few are too dark to be distinct, for instance, the bronze ram bearer (fig. 8) and the marble warrior (figs. 9 and 11). The inclusion of the dimensions in the legends is a most useful feature.

Where all these precious works of art are now and what their ultimate fate will be is not yet known, and no reference is made to these questions in the text.

METROPOLITAN
MUSEUM OF ART

GISELA M. A. RICHTER

ANTIKE TERRAKOTTEN, by Gerda Bruns. Pp. 50, figs. 33 and frontispiece. RÖMANISCHE SKULPTUREN, by Carl Blümel. Pp. 68, figs. 38 and frontispiece. Berlin, Verlag Gebr. Mann, 1946.

Antike Terrakotten, by the editor of the series, is a connected history, composed of the descriptions of thirty-three very beautiful pieces, spanning the period from the Archaic Greek to the early Roman Empire. The author stresses the technical aspects of the subject. She recognizes the use of partial moulds for the first item, a human-faced quadruped which some would have supposed to have been hand modeled. A much later figure of Dionysos she observes to have been hand modeled, and therefore perhaps to have served as a model for partial moulds before it received its own final painting. She describes the coloring of the earliest pieces as a vase technique, in contrast to the pastel coloring on a white ground, the common system for terracotta sculpture. She further states that the surface of the typical colored Greek terracotta was firm and of a silky polish; this statement is supported by one example, a beautifully preserved statuette of a comic actor.

On the historical side the author stresses the importance of the destruction of Thebes by Alexander the Great, and the consequent exodus of Theban coroplasts to nearby Tanagra and overseas to Alexandria and the cities of Asia Minor. The reviewer would like to ask: "and to Tarentum?"

The pieces are of all kinds: architectural revetments, interior wall ornaments, statues, statuettes and reliefs.

All are fine, and many not well known. The text is readable, the descriptions colorful and adequate. The reader's only difficulty arises from the introduction of Tanagra and the typical Tanagra figurines at the beginning of the book and then their abandonment for half the book.

Römische Skulpturen, by Carl Blümel, deals with some of the world's most famous pieces. The material is admirably illuminated against the background of the history of the Roman Empire. The power of this empire, which the author seems to admire tremendously, and the private lives of such characters as Herodes Atticus (whose distinguished Greek descent he stresses) and the emperor Caracalla, all are made to contribute to the understanding and appreciation of the works of sculpture.

The sections on portraiture and on Roman relief are well developed, though more or less routine in their content. Original and provocative is the short section on Roman copies of Greek sculpture. Illustrating only ten objects and consuming less than ten pages of text, the author yet manages really to explain the significance of this class of sculpture to the Romans. One not only sees the famous woman's head, partially covered by drapery, as a direct copy from a Greek bronze original of the middle of the fifth century B.C., but one also studies it in comparison with a complete copy of the same work, with the head reworked into a portrait of Faustina the Elder, and by reference to other adaptations of the same type for other purposes. In connection with another Berlin goddess, a copy of a work of the same era, the author refers us to a pair of similar statues made for King Juba II of Mauretania in the Augustan age. The Berlin copy of the Doryphoros of Polykleitos is singled out for its quality, due to its special creation for the imperial palace on the Palatine. These and other observations on the function of copies in Rome are validated by observations on technique. Similar technical studies are directed toward all the objects illustrated in the

book and are important because the author is a recognized authority on the technique of marble sculpture.

THE WALTERS ART
GALLERY

DOROTHY KENT HILL

ANTIKE MÜNZEN, by Kurt Lange. Pp. 53, figs. 68, map. Berlin, Verlag Gebr. Mann, 1947.

This little pocket-size book incorporates an exhibition within its covers. Every coin type discussed is superbly illustrated. It is, in miniature, a study of the ancient period comparable to the author's *Münzkunst des Mittelalters*. The reduction in size and apparent cost, however, has not detracted, but has rather contributed a feeling of intimacy, which is, or should be, exceedingly satisfying to the admirer of ancient coinage.

The author outlines the stylistic development of coin types, relating them to trends in other forms of art, particularly sculpture, from the beginning of coinage in the West to the period of Constantine the Great, through the brief analysis and discussion of some sixty types, mostly portraits. The little (2:1) enlargements are scattered throughout the text, generally within a page of the reference, which compensates to some extent for the lack of identification beneath each figure, or of a table of illustrations, which would have been especially appreciated for the pieces pictured in original size on two plates at the end. The technical discussion is held to a minimum, a page at the beginning being devoted to the metals employed and to the methods of manufacture, and another (p. 34) to the early forms of Roman coinage, with "pre-Mattingly" dates. The correctness of a date seems of little moment in a work primarily devoted to the aesthetic—a delightful refresher for the initiated, a profitable and inspiring introduction for those not yet so fortunate.

THE JOHNS

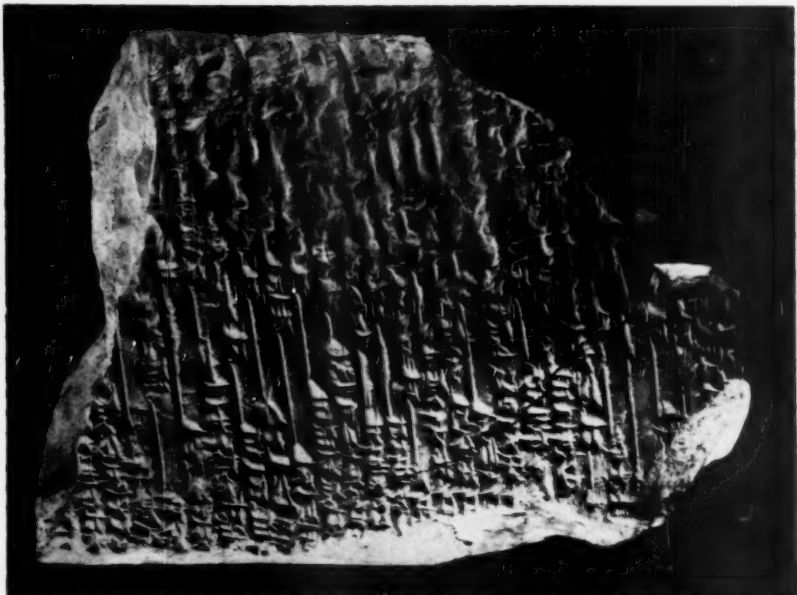
SARAH ELIZABETH FREEMAN

HOPKINS UNIVERSITY



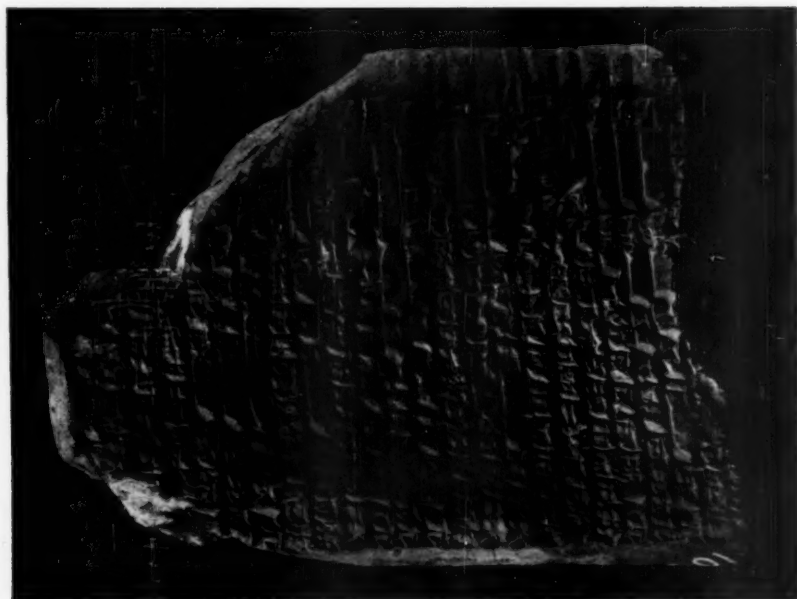
PLATES

PLATE I



TABLET B, CBS 10355, REVERSE

[Kramer]

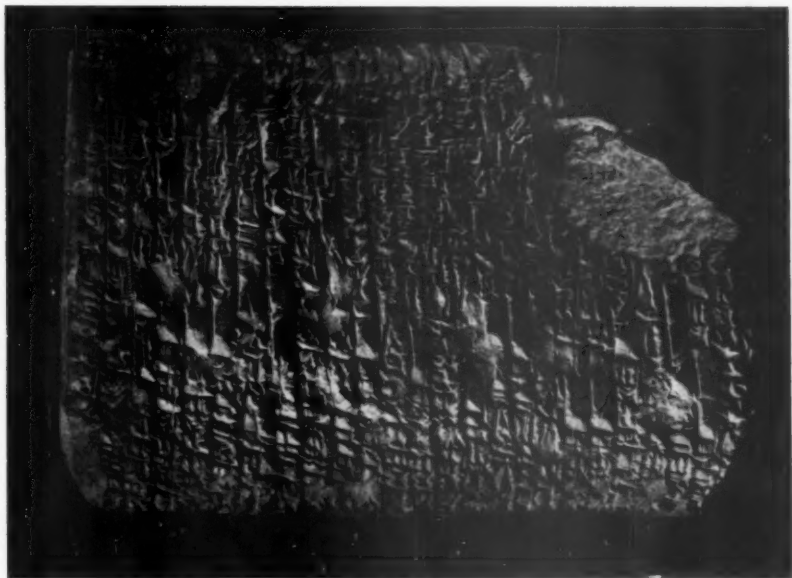


TABLET B, CBS 10355, OVERSE



TABLET G. CBS 4364, REVERSE

[Kramer]



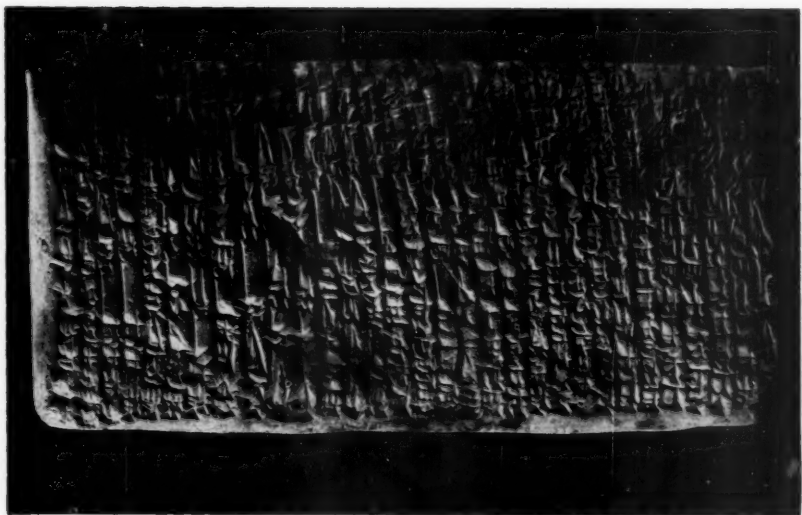
TABLET G. CBS 4364, OBVERSE

PLATE III

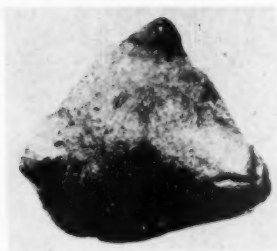
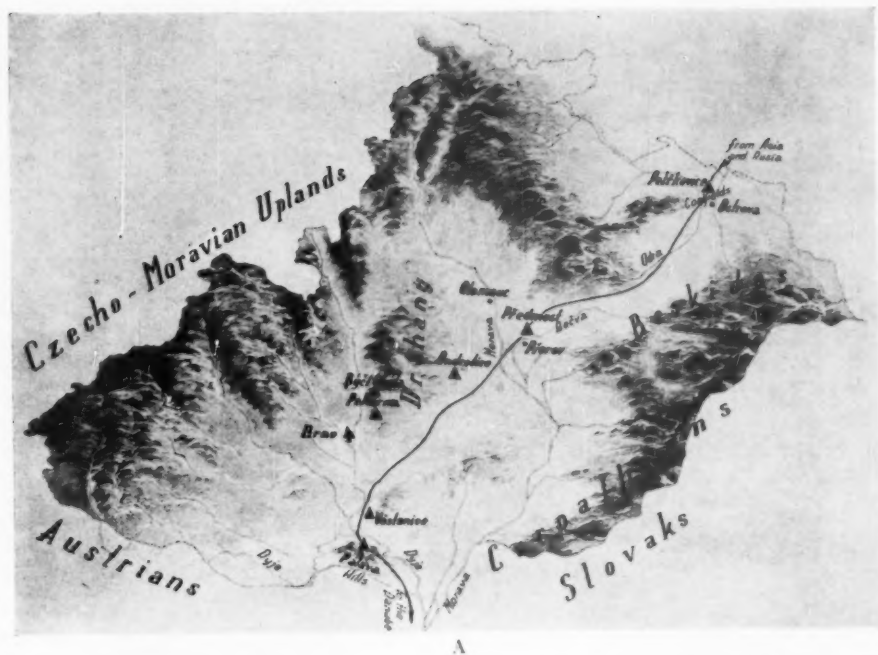


TABLET J. CBS 6140, REVERSE

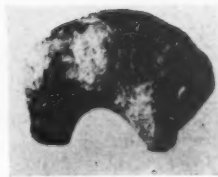
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TABLET J. CBS 6140, OBVERSE



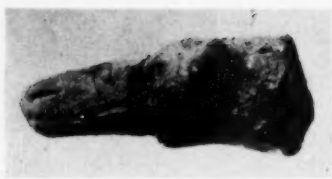
B



C

A. MAP OF MORAVIA. B. & C. AURIGNACIAN CERAMICS, BEAR'S HEAD AND MAMMOTH.
[Absolon]

PLATE V



A



B



C



D



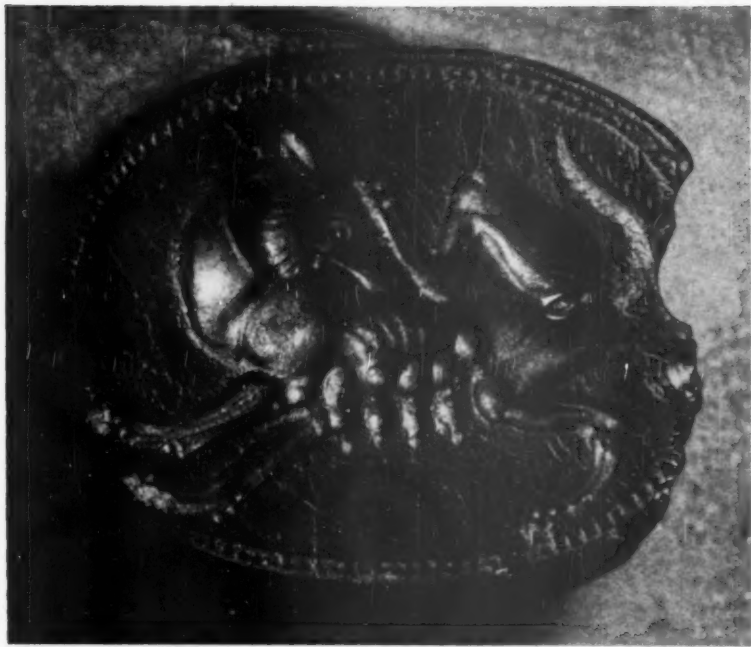
E



F

DILUVIAL FIGURINES

A. REINDEER. B. RHINOCEROS. C. REINDEER. D. LIONESS. E. CAVE BEAR. F. CAVE BEAR.
[Absolon]



A. ARCHAIC IONIAN SEAL REPRESENTING HEKATE-ARTEMIS AS A WHELPING DOG. (ENLARGEMENT)
[Reitler]



B. SKYPHOS OF THE PISTICCI PAINTER, OBIVERSE.
[Budde]



A. SKYPHOS OF THE PISTICCI PAINTER, REVERSE.
[Budde]



B. ENTRANCE OF THE ZOSER COMPLEX, AS RESTORED.
[Archaeological News, The Near East]



STATUETTE OF THE CHANCELLOR ISHETI
[Archaeological News, The Near East]

PLATE IX



A. ORATORY OF PTAH AT MIT-RAHINEH, DEDICATED BY SETI I



B. EZBET-EL-WALDA. TOMB SCULPTURE OF THE SECOND DYNASTY
[Archaeological News, The Near East]



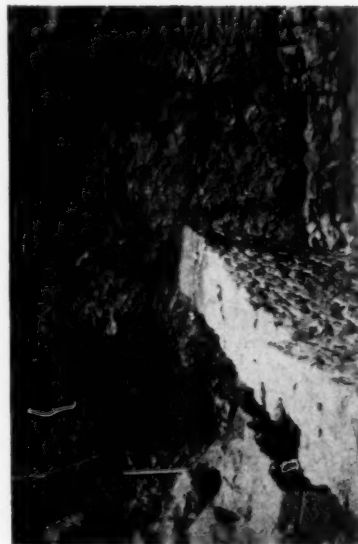
A. BUBASTITE GATE AT KARNAK



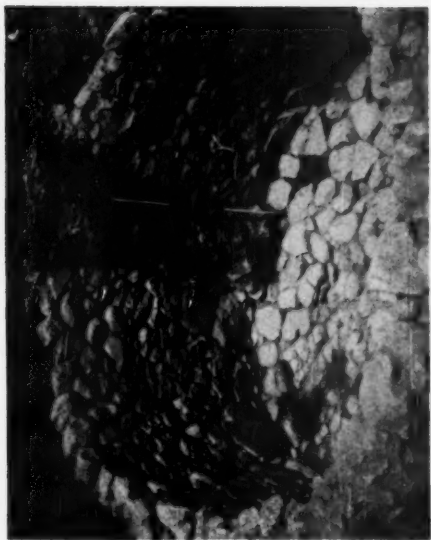
B. PAGE OF THE ISAIAH ROLL FROM KALLIA
[Archaeological] News, The Near East]



B



A



D



C

BAYRAKLI TEPE NEAR SMYRNA, EARLY GREEK WALLS
[Archaeological News, The Near East]



A



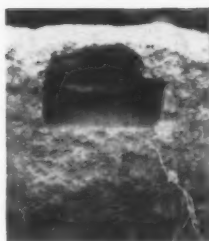
B



C



D



E



F



G

TABSU
[Archaeological News, The Near East]

PLATE XIII



A



B



C



D

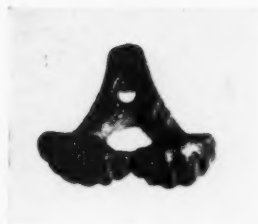


E



F

TARSUS POTTERY
[Archaeological News, The Near East]



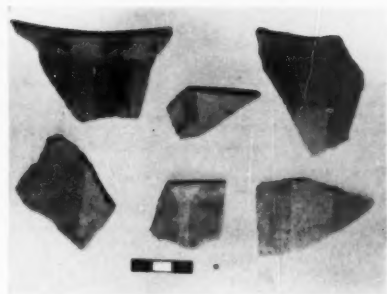
A



B



C



D



E



F



G

PLATE XV



A. PITS IN VIRGIN SOIL AT MATARRAH



B. LEVELS AT QALAT JARMO
[Archaeological News, The Near East]

THE SCHOOL OF AMERICAN RESEARCH

THE SCHOOL OF AMERICAN ARCHAEOLOGY was founded by the Archaeological Institute of America in 1907 to conduct the researches of the Institute in the American field, direct expeditions of the branch Societies, and afford opportunities for field work and training. In 1911 it became the SCHOOL OF AMERICAN RESEARCH. The headquarters of the School are at Santa Fe, New Mexico, where it maintains offices, laboratories, a library, a museum of archaeology, ethnology, and history, and an art gallery. A California Division functions in cooperation with the University of Southern California at Los Angeles, and the Department of Hispanic Studies conducts the activities in Mexico, Central and South America.

The School now devotes its resources mainly to research and publication. It no longer conducts summer field seasons. It directs the Museum of New Mexico with its numerous branches, and has various activities in co-operation with the University of New Mexico. A staff of Associates and Fellows conducts the research work of the School in the various culture areas of the American continent. During the current year, projects are planned in the Southwest and Mexico. The School has just finished a five-year field expedition in Ecuador. It publishes monographs, handbooks of Archaeological History, papers, Administrative Reports and a monthly magazine, *El Palacio*.

For information, address the Director—

HON. BOAR W. LINT
Palace of the Governors
Santa Fe, New Mexico

THE AMERICAN ACADEMY IN ROME

THE AMERICAN ACADEMY IN ROME, begun in 1898 as the American School of Architecture in Rome, was founded in 1897 for students of architecture, painting, and sculpture. In 1914 it united with the American School of Classical Studies in Rome, organizing the two branches known as the School of Fine Arts and the School of Classical Studies. The Director of the Academy is Laurence F. Roberts.

SCHOOL OF FINE ARTS. Fellowships in architecture, landscape architecture, musical composition, painting, sculpture, and history of art are available annually for a term of one year with a possibility of renewal.

SCHOOL OF CLASSICAL STUDIES: Frank E. Brown, Professor in Charge. Five fellowships are available annually for a term of one year with a possibility of renewal; two research fellowships for mature scholars, preferably those actively teaching, who have already initiated a program of work which can be advantageously completed in Rome, stipend \$2,500 a year; one senior fellowship for a student who has completed the work for a Ph.D. degree or who is in the final stages of the completion of this work; two junior fellowships for students in the preliminary stages of their graduate work. The senior and junior fellowships each carry a stipend of \$1,200 a year and travel allowance.

Applications for these fellowships may be obtained from the Executive Secretary and must be filed in the New York office not later than February first of each year.

For detailed information, write to:

MISS MARY T. WILLIAMS, Executive Secretary
American Academy in Rome
161 Park Avenue, New York 17, New York

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS was founded for graduate students by the Archaeological Institute of America in 1881. In 1896 it was organized as a corporation under the laws of the State of Massachusetts. It is supported in part by the co-operation of leading American universities and colleges, in part by the income of endowment funds. No charge for tuition is made to the graduates of the supporting institutions. The School library contains about twenty thousand carefully selected volumes. The Gennadeion Library of the School, devoted to Mediaeval and Modern Greece, contains about fifty thousand items.

The staff of the School consists of Director Carl W. Blegen; Assistant Director John L. Caskey; Shirley H. Weber, Librarian of the Gennadeion and Professor of Classics; Oscar Branner, Professor of Archaeology (on leave 1943-1945); Edward Capps, Jr., Professor of Greek Literature and Archaeology (1945-1949); Paul A. Casement, Editor of *Phoenix*; Gorham P. Stevens, Honorary Architect; John Travlos, Architect of School Excavations; George H. Chase, Associate Editor of the *American Journal of Archaeology*; Aristides Kyriakides, Business Manager; Miss Eurydice Demetropoulos, Assistant in the Gennadeion; and Miss Virginia Spurr, Publication Secretary.

Four fellowships are available for students of the School, each with a stipend of \$1,500. The Edward Capps fellowship is awarded without examination on the recommendation of the Executive Committee and preference is given to candidates primarily interested in the language, literature, and history of Greece, rather than in archaeology. The James Hignall Wheeler fellowship is awarded without examination on the recommendation of the Director of the School. The John Williams White fellowship in archaeology, and the Thomas Day Seymour fellowship in Greek language, literature, and history are awarded annually on examination. Correspondence about fellowships should be addressed to Professor Gertrude Smith, University of Chicago, Chicago, Illinois.

For general information, address the Secretary of the Managing Committee—

PROFESSOR CHARLES A. BOWENSON, JR.,
Brown University, Providence 18, R. I.

AMERICAN SCHOOLS OF ORIENTAL RESEARCH

THE SCHOOL IN JERUSALEM was founded in 1900. In 1921 it was incorporated under the laws of the District of Columbia under the name AMERICAN SCHOOLS OF ORIENTAL RESEARCH. The INSTITUTE is represented on the Board of Trustees. The Schools are supported by more than sixty American Universities, Colleges and Seminaries and by private subscriptions. The School in Jerusalem offers to properly qualified persons excellent opportunities for the study of the geography, archaeology, and history of Palestine and Syria, and of the Semitic languages. It is affiliated with the British School and the French School in Jerusalem. No charge for tuition is made to members of the supporting institutions; other students are charged a fee of \$50 per annum. The Baghdad School offers opportunity for research to a limited number of students through participation in its excavations and the use of its library.

The Director of the School in Jerusalem for the academic year 1945-46 is Professor Ovid R. Sallam, McCormick Theological Seminary.

THE SCHOOL IN BAGHDAD was opened in 1923 and is housed in the Iraq Museum, Baghdad. The Director is Professor Albrecht Goetts, Yale University, and the Annual Professor is Professor George C. Cameron, University of Chicago.

The Schools offer annually one or more fellowships, the stipends depending upon available funds.

For further information, address the President—

CARL H. KRAHLING,
Officer of the School
Yale University
New Haven, Conn.

AMERICAN SCHOOL OF PREHISTORIC RESEARCH

THE AMERICAN SCHOOL OF PREHISTORIC RESEARCH was founded by the late Dr. George Grant MacCurdy and Mrs. MacCurdy in 1921. The headquarters of the School are at the Peabody Museum of Harvard University. The annual summer term for students formerly held in Europe is not being continued. Instead the School is devoting its resources to excavations and publications dealing with the prehistoric archaeology of the Old World. A limited number of properly qualified students may from time to time participate in its excavations as circumstances offer.

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